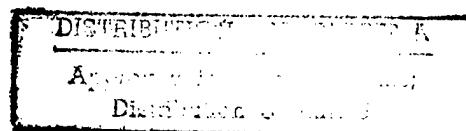




19981009 018



DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

AFIT/GLM/LAL/98S-5

AN EVALUATION OF CHARACTERISTICS
AND PRACTICES ASSOCIATED WITH
EFFECTIVE MENTORING WITHIN
THE UNITED STATES AIR FORCE

THESIS

Sharon Gibson, Captain, USAF

AFIT/GLM/LAL/98S-5

The views expressed in this article are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the US Government.

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Presented to the Faculty of the Graduate School of Logistics and Acquisition
Management of the Air Force Institute of Technology
Air University
Air Education and Training Command
In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Logistics Management

Sharon Gibson, B.S., M.A.

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September 1998

Approved for public release; distribution unlimited

Acknowledgements

As I reflect back over the past year, I recognize, through the pursuit of my research, that the individual responsible for guiding me down the correct path was not only my thesis advisor, but also my mentor. I wish to extend my gratitude and appreciation to Lt Col James R. Van Scotter for "communicating his vision to me" and for supporting me when my vision was not quite the same as his vision. His concern for my academic, professional, and mental well-being provided inspiration and motivation when, as he would say, "my body was rejecting AFIT."

I would also like to say thank you to my reader, Dr. Jan Muczyk, who has the much coveted ability of seeing through the academic and military rhetoric and identifying the truly important purposes of research. His guidance was much appreciated.

I owe a special debt of gratitude to Brigadier General David A. Herrelko, Aeronautical Systems Center Vice Commander, for his willingness to sponsor my research and the personal interest he took in my research. His genuine interest in mentoring young officers was evident in all the assistance he provided. Not only did he provide me access to a very receptive survey population, but he also provided an outlet for sharing my research findings.

Finally, I would like to acknowledge my friends from AFIT who gave unselfishly of their time in helping me attach 10,000 labels to surveys and envelopes. Thank you to Mrs. Patti Blakely, Capt Dave Hillman, Capt Billy Webb, Capt Mike Wilson, and Capt Joe "Red" Wolfkiel. Without you, I would have no fingerprints left and, more importantly, no data.

Sharon Gibson

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Abstract

The US Air Force has recently implemented a policy of assigning supervisors as the mentors of company grade officers. This study investigated the differences in mentoring effectiveness and perceived barriers to mentoring reported by Air Force company grade officers (CGOs), their organizationally-assigned mentors (assigned), and CGO-selected mentors (voluntary). Results indicated that junior officers believed they had effective mentoring relationships from both assigned and voluntary mentors, but as officers progressed to the rank of captain, they were more likely to seek out mentors outside of their chains-of-command. Junior officers indicated work-related contact time spent on career-related mentoring primarily influenced their judgments of effective mentoring. Leader/Member Exchange, Sense of Competence, Proactive Personality, and Performance Ratings influenced perceptions of mentoring from the mentor perspective. More competent, informed CGOs were less likely to perceive barriers to gaining mentors and mentors were less likely to consider the mentoring relationship risky when the CGOs were more junior in rank (lieutenants). Exposure to mentoring-related information increased the effectiveness and decreased the perceptions of barriers for both protégés and mentors. Research conclusions suggest the Air Force Mentoring Program is effective for lieutenants, but the mandatory nature of the program may not maximize benefits for captains.

AN EVALUATION OF CHARACTERISTICS AND PRACTICES ASSOCIATED
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I. Introduction

Overview

Mentoring has received substantial research attention in the past fifteen years. Research links effective mentoring with compensation attainment and promotion (Dreher & Cox, 1996), gender and race differences between mentor and protégé (Dreher & Cox, 1996; Thomas, D. A., 1990), work-related networking and power (Ragins, 1997), integration of women into mentoring systems (Burke & McKeen, 1990; Nieva & Gutek, 1981), protégé characteristics as predictors of successful mentoring relationships (Whitely, Dougherty, & Dreher, 1992), and reduced employee turnover and job-transfer decisions (Brett & Reilly, 1988). Though the costs and benefits of mentoring have been investigated from mentor and protégé perspectives, we still know little about what makes mentoring effective. Even less is known about how mentors choose prospective protégés or vice versa. As organizations, including the United States Air Force (USAF), turn to mentoring programs as a means to cultivate future leaders, it is important to learn what makes some mentoring relationships more effective than others. Mentoring research has taken place in a variety of settings such as graduate schools, small and large corporations, research and development firms, and business schools environments, but little research

has been conducted in the military (Sullivan, 1993) though the benefits of effective mentoring have been recognized by senior military leaders.

Purpose of the Research

Although informal mentoring has been considered important in officers' career development for years (Gouge, J. A., 1986, Lewandowski, F., 1985, and Uecker, M. E., 1984), the USAF formalized its commitment to mentoring by releasing Air Force Policy Directive (AFPD) 36-34, Air Force Mentoring Program, on 1 November 1996. This directive was implemented, as outlined in Air Force Instruction (AFI) 36-3401, Air Force Mentoring, on 1 July 1997. Its purpose was to establish mentoring as a fundamental responsibility of all Air Force supervisors. The intent of Air Force Chief of Staff, General Ronald R. Fogleman, was to "infuse all levels of leadership with mentoring to effect a culture change – one where senior officers can pass on principles, traditions, shared values, and lessons of our profession," (AFPD 36-34, p. 1).

Implementing this policy makes it clear that mentoring is defined differently in the civilian and military environments. Mentoring research in civilian settings focuses almost exclusively on voluntary, informal mentoring relationships, but AFD 36-34 makes supervisors responsible for mentoring to assist in their subordinates' professional development, career guidance, knowledge of air and space power, and understanding of Air Force history and heritage. AFI 36-3401 designates the immediate supervisor or rater as the primary mentor for a subordinate, generally a company grade officer (CGO). Under this instruction, supervisors are responsible for discussing performance, potential, and professional development with CGOs during performance feedback sessions as well as sharing technical knowledge. Thus, the USAF is in the process of implementing a

formal program with assigned mentors that is intended to complement traditional, informal mentoring practices and extend the benefits of mentoring to a larger number of CGOs. However, there is no research showing the proportion of CGOs who consider these supervisors to be their mentors, versus those who prefer a different mentor or no mentor at all. There is no empirical evidence comparing the effectiveness of voluntary, informal mentoring with the effectiveness of assigned, formal mentoring.

Most of the literature views mentoring as a process that occurs in voluntary, informal relationships (i.e., Kram, 1983, 1985), but there is some research examining the factors that contribute to the effectiveness of mentoring programs in which protégés are assigned to mentors. Research does show that formal mentoring programs, in which protégés are assigned to mentors, are more successful when the program receives senior-level support, extensive orientation training for mentors and protégés, and careful pairing of mentors and protégés (Noe, 1988). In contrast, research investigating voluntary mentoring suggests that a variety of individual factors including personality characteristics, age, gender, rank, organizational tenure, protégés performance ratings, supervisor's perceptions of role ambiguity, leader-member exchange, training, and previous mentoring experience contribute to the effectiveness of mentoring activities.

Surprisingly, there has been little research examining the relationship between the amount of time mentors and protégés are in contact and the effectiveness of the mentoring relationship. This may provide a simpler explanation for the differences in effectiveness of mentoring, as judged by the protégé. Therefore, it may be valuable to examine the factors that contribute to mentoring effectiveness.

Mentoring literature suggests that mentors are more willing to engage in voluntary mentoring relationships with protégés who are considered high performers (Olian, Carroll, & Giannantonio, 1993), remind them of themselves during earlier stages of career-development, or appear to need help or direction (Allen, Poteet, & Burroughs, 1997). Literature indicates such voluntary relationships are effective, but assigning supervisors as the mentors of subordinates fails to recognize potential benefits to be gained by voluntary participation in mentor-protégé dyads. It would be very valuable to examine the factors that influence mentoring effectiveness when supervisors are assigned as mentors as there is no empirical evidence that assigned mentors (supervisors) are more or less effective than voluntary mentors who are not the supervisor.

Propositions

Three specific areas have been neglected in recent research. These areas include: 1) differences in the effectiveness of Supervisory Mentors (assigned) and Non-Supervisory mentors (voluntary), 2) potential differences in characteristics and work-related behaviors of CGOs with and without Mentors, and 3) the relationship between contact time and mentoring effectiveness for Supervisory Mentors (assigned) and Non-Supervisory mentors (voluntary).

II. Literature Review

Overview

Mentoring has received substantial attention from behavioral researchers in the past decade due to its positive effect on organizational functions and members. Mentoring has been related to enhanced job performance of mentors and protégés as well as a being a means for organizational newcomers to become acclimated to formal and informal norms within the organization. This kind of career development is especially important in organizations with strong core values and traditions that must be passed on to the next generation of leaders. Mentoring also has been credited with increasing the upward mobility and serving as a “leadership proving ground” for future organizational leaders (Sullivan, 1993).

Early research in mentoring (Kram, 1983) focused on developing a conceptual model of the phases associated with a mentoring relationship. Based on interviews between younger and older manager pairs from a public utility corporation engaged in mentoring relationships, she determined that initiation, cultivation, separation, and redefinition were critical stages in the mentoring process. Subsequently, research has used this model as a guide and investigated the initiation stage in greater detail. Because of the potential career benefits for protégés, researchers have been interested in learning how mentor-protégé relationships begin and which factors influence mentors' decisions to help a subordinate. Kram (1985) and Cook (1987) supported the theoretical premise that prospective mentors are attracted to prospective protégés that are considered high performers. One reason for this attraction may be the anticipation by the mentor that

helping a high-performing protégé will provide a good return on investment of time, as well as the possibility that the mentor may be recognized by others as being partially responsible for the protégé's career success. It has also been suggested that similarity-attraction models may account for mentor-protégé attraction (Burke, McKeen & McKenna, 1993). Individuals are more likely to be attracted to each other when they believe similar characteristics exist between them. For example, similarities in intelligence, approaches to procedures, personality, background, ambition, education, and shared activities outside of work may explain why mentors are more likely to choose some potential protégés over others.

There is also research examining situations and behaviors that detract from a potential mentor's willingness to engage in a mentoring relationship. Results from a study involving 160 male and female senior business executives suggested that potential mentors consider possible negative consequences such as employee jealousy, the time-consuming nature of the mentoring relationships, risks associated with disloyal protégés, and potential embarrassment from the protégé's failure or underachievement (Ragins & Scandura, 1994) as areas of potential concern.

In an effort to measure the advantages and disadvantages of engaging in mentoring relationships, an instrument to evaluate mentoring effectiveness was developed by Tepper, Shaffer, and Tepper (1996). The original, 16-item instrument was validated using a sample of 568 managerial employees. The scale was comprised of two factors, psychosocial mentoring functions and career-related mentoring functions conceptualized by Kram (1983). Career functions included sponsorship, exposure and visibility, coaching, protection, and challenging assignments. Psychosocial functions included role

modeling, acceptance and confirmation, counseling, and friendship. Confirmatory factor analysis supported the two-factor model, and showed that the scale was invariant across gender (Tepper, Shaffer, & Tepper, 1996, p. 849). The scale can be modified so that mentoring effectiveness can be measured from the mentor or protégé perspective.

Turban and Dougherty (1994) investigated the impact that the protégé personality characteristics of locus of control, self-monitoring, and emotional stability had on the amount of mentoring received. A study of 147 professionals and managers indicated all of the personality constructs directly influenced the degree to which respondents were willing to initiate mentoring relationships; thus, the amounts of mentoring received were greater for individuals reporting higher levels of locus of control, self-monitoring, and emotional stability.

Thomas (1990) examined the extent to which protégés' mentoring experiences were influenced by race. His sample consisted of 88 black and 107 white managers in a public utility corporation. He found that white males tended to serve more frequently in mentor roles. His study also found that black male and female protégés paired with mentors from their own racial and gender groups reported experiencing greater psychosocial support (counseling, acceptance, and personal support) than could be found in relationships with white male mentors. Dreher and Cox (1996) reported protégé race and gender impacted the development and perceived advantages of mentoring relationships. Based on results from graduate business school alumni, Dreher and Cox reported members of the same gender and race were more likely to develop a relationship. Additionally, they found that protégés reported a relationship with a white male mentor was more advantageous than having a female or member of another racial group as a

mentor. The researchers suggested that protégés perceived white male mentors as being able to provide greater career support because they had more organizational influence and more effective use of social networks, communication channels, status, and position legitimacy (Dreher & Cox, 1996, p. 306).

Ragins and Cotton (1991) investigated the possibility that males and females differed in their perceptions of barriers to obtaining a mentoring relationship by surveying 880 members of research and development firms. They hypothesized that females would perceive more barriers to mentoring than males, but age, rank, and length of employment would be negatively related to perceptions of barriers to mentoring. Ragins and Cotton (1991) developed a 17-item, seven-point Likert-type scale to assess perceptions of barriers to mentoring. They found that women were more likely than males to report difficulty in gaining access to mentors. Additionally, the study indicated an unwillingness of mentors to engage in a relationship with females, and disapproval from other organizational members, and perceptions by others that a male's attempt to initiate a mentoring relationship with a female would be misinterpreted as a sexual advance were also deterrents. Additionally, results indicated older, higher-ranking respondents believed they had greater access to potential members than younger, lower-ranking respondents. Age, rank, and tenure were not significantly related to a protégé's concerns of initiating a mentoring relationship.

Though mentoring research has typically involved the identification of desirable characteristics of likely protégés, as reported by protégés (Turban & Dougherty, 1994), scant research has examined the desirable characteristics and risks related to protégé selection from the potential mentor perspective. Allen, Poteet, and Burroughs (1997)

interviewed 27 white-collar workers who identified themselves as being mentors to study factors expected to influence the mentor's decision-making process in choosing to mentor and factors expected to influence the mentor's selection of a protégé. This study examined four areas: reasons a mentor decides to be a mentor; organizational influences that may detract or encourage mentoring; characteristics shared or considered desirable by mentors and protégés; and potential advantages and disadvantages, from the mentor perspective, of engaging in mentoring relationships. Results indicated that the desire to build a competent workforce, sharing information with others, wanting to help others, and increasing personal learning were the predominant reasons individuals chose to mentor others. Time demands and organizational structure were the two strongest organizational deterrents related to mentoring decisions.

Allen et al. (1997) reasoned that results of work-force reductions, flatter organizational structures, and job insecurity may have limited opportunities for potential mentors or reduced their motivation to become involved in mentoring. Other findings suggested mentors selected protégés who reminded them of themselves during earlier stages of life and career-development. Findings also suggested mentors were motivated by the perception that a potential protégé may need help or direction. Finally, Allen et al. (1997) concluded that the benefits of mentoring outweighed possible disadvantages. Benefits associated with successful mentoring relationships included network support development, job-related rewards focused on the mentor as well as others, and self-satisfaction (Allen et al., 1997, p. 86). Disadvantages included time taken away from work and geographic separation due to organizational structure and layout.

Research by Olian, Carroll, and Giannantonio (1993) of 145 managers in a banking industry also investigated mentor-protégé selection criteria. Results indicated past protégé performance, gender similarity between mentor and protégé, and protégé marital status impacted a mentor's willingness to mentor. Talented employees were more likely to have mentors, as mentors perceived more benefits could be gained from higher performing protégés. Likewise, potential protégés who did not have a history of high performance were less likely to be selected by mentors who believed they, themselves, faced a high levels of barriers to mentoring.

There is also literature describing research involving characteristics such as Leader/Member Exchange (LMX), impact of performance ratings, supervisor's role ambiguity, and perceptions of risk. Proactive Personality ratings, as related to job performance ratings, were examined in a study by Crant (1995). Proactive Personality, as defined by Bateman and Crant (1993), measures an individual's disposition toward engaging in proactive behavior, identifying opportunities and acting on them, taking initiative, taking action, and persevering until a meaningful change has occurred (Crant, 1995, p. 532). An individual who is not proactive would not be as likely to identify and seize opportunities. Crant theorized that proactive personality, which represents behaviors indicative of work-related accomplishments, was related to job performance. Bases on his study of 146 real estate agents, Crant found agents with higher Proactive Personality Scale scores had higher job performance than their less proactive counterparts.

Fried and Tiegs (1995) investigated supervisors' experience of role ambiguity with inflation of performance ratings of subordinates in a study of 68 university supervisors

and graduate student supervisors. Role ambiguity, as defined by Kahn, Wolfe, Quinn, Snoeck, and Rosenthal (1964), deals with clarity of job demands and procedures. Fried and Tiegs believed that because interpersonal relationships between supervisors and subordinates did not impact the role ambiguity experienced by supervisors, supervisors would not intentionally inflate performance ratings of subordinates. Results from the study suggested supervisors self-reported levels of role ambiguity were not statistically related to actual performance ratings of subordinates.

LMX theory posits that leaders, or supervisors, use different styles of communication in their dealings with subordinates. These communication styles are thought to be based on the supervisor's evaluation of a subordinate's performance on specified tasks (Liden & Maslyn, 1998). Supervisors are thought to value more highly subordinates whose performance on tasks is of a higher caliber than the subordinates' peers. Thus, these subordinates enjoy a greater "quality relationship" with the supervisor. Outward indicators of a quality relationship are represented by a greater exchange of valued resources between superior and subordinate. Valued resources may include budgetary support, materials, equipment, information, and attractive assignments.

In an earlier study conducted by Wayne, Shore, and Liden (1997) of 1,413 salaried employees and 505 managers in a large corporation, LMX was hypothesized to be positively related to performance ratings of subordinates. High quality LMX relationships between supervisor and subordinate were believed to enhance subordinate performance as the subordinate enjoyed extra support, feedback, and opportunities than subordinates with a low quality LMX relationship (Wayne, Shore, & Liden, 1997, p. 91).

The researchers also believed subordinates involved in a high-quality LMX relationship benefited from a leniency-bias on supervisor's evaluations of their performance.

LMX was evaluated, in conjunction with factors thought to impact willingness to mentor, in a study of 607 state government supervisors (Allen, Poteet, Russell, & Dobbins, 1997). Researchers found that previous experience as a mentor, experience as a protégé, education and quality of relationship with supervisor (LMX), and age were related to supervisors' willingness to mentor (Allen et al, 1997, p 1). Results also indicated that individuals who reported higher-quality relationships (LMX scores) with their supervisors perceived fewer barriers to mentoring versus subordinates with lower-quality supervisor-subordinate relationships (Allen et al, 1997, p. 15).

Research Objectives

The first research objective of this study is to test if findings found in published research regarding mentoring also hold true in the USAF. Specific areas of interest include: 1) the relationship between Mentoring Effectiveness, perceptions of Barriers to Mentoring, and exposure to mentoring training, publications, or groups fostering mentoring-related activities; and 2) the relationship between CGO characteristics (Proactive Personality, Sense of Competence, and LMX) and Mentoring Effectiveness and Barriers to Mentoring. The second research objective involves expanding the manner in which superior-subordinate mentoring relationships are examined. This study will examine relationships between Supervisory Mentors and Non-Supervisory Mentors and CGOs by evaluating reports of Mentoring Effectiveness, perceived Barriers to Mentoring, and Work-Related Contact Time between Supervisory Mentors and Non-Supervisory Mentors and CGOs. The third research objective is to identify possible

reasons for protégé selection by evaluating differences between company grade officers with and without mentors.

Research Questions and Hypotheses

In order to clearly outline the research objectives, the following research questions (RQ) and hypotheses (H) are presented.

RQ1: What factors influence perceived Barriers to Mentoring for:

- A. CGOs without Mentors,
- B. CGOs with Non-Supervisory Mentors,
- C. CGOs with Supervisory Mentors,
- D. Mentors,
- E. and Supervisors?

H1: Barriers to Mentoring, as reported by CGOs, will be negatively related to CGO rank, organizational tenure, race, and gender.

H2: Barriers to Mentoring, as reported by CGOs, will be negatively related to CGO self-reports of Sense of Competence, Leader/Member Exchange, and Proactive Personality.

H3: Barriers to Mentoring, as reported by CGOs, will be negatively related to CGO self-reports of Exposure to Mentoring.

H4: Barriers to Mentoring, as reported by Mentors, will be negatively related to Mentor self-reports of Perceptions of Risk.

H5: Barriers to Mentoring, as reported by Mentors, will be negatively related to Mentor self-reports of Role Ambiguity.

RQ2: What factors influence Mentoring Effectiveness (as reported by CGOs)

for:

- A. CGOs with Supervisory Mentors,
- B. CGOs with Non-Supervisory Mentors,
- C. and all CGOs (if differences do not exist between supervisory and Non-Supervisory Mentors)?

H6: Mentoring Effectiveness, as reported by CGOs, will be positively related to CGO self-reports of Work-Related Contact Time with Mentors.

H7: Mentoring Effectiveness, as reported by CGOs, will be positively related to CGO self-reports of Sense of Competence, Leader/Member Exchange, and Proactive Personality.

H8: Mentoring Effectiveness, as reported by CGOs, will be positively related to CGO self-reports of Exposure to Mentoring.

H9: Mentoring Effectiveness, as reported by CGOs, will be positively related to shared characteristics with Mentors.

H10: Mentoring Effectiveness, as reported by Mentors, will be positively related to Work-Related Contact Time with CGOs.

H11: Mentoring Effectiveness, as reported by Mentors, will be positively related to CGO Performance Ratings.

H12: Mentoring Effectiveness, as reported by Mentors, will be positively related to CGO self-reports of Sense of Competence, Leader/Member Exchange, and Proactive Personality.

H13: Mentoring Effectiveness, as reported by Mentors, will be positively related to Mentor self-reports of Exposure to Mentoring.

H14: Mentoring Effectiveness, as reported by Mentors, will be negatively related to Mentor self-reports of Perceptions of Risk.

H15: Mentoring Effectiveness, as reported by Mentors, will be negatively related to Mentor self-reports of Role Ambiguity.

RQ3: Does assigned mentoring appear to be less effective than voluntary mentoring?

H16: Assigned and Voluntary mentoring will be positively related to Mentoring Effectiveness.

H17: Assigned mentoring will be positively related to Mentor self-reports of Perceptions of Risk.

H18: Assigned mentoring will be positively related to Mentor self-reports of Role Ambiguity.

H19: Voluntary mentoring will be negatively related to Mentor self-reports of Perceptions of Risk.

H20: Voluntary mentoring will be negatively related to Mentor self-reports of Role Ambiguity.

H21: Voluntary and Assigned mentoring will be positively related to Mentor self-reports of Exposure to Mentoring.

H22: Voluntary and Assigned mentoring will be positively related to Mentor self-reports of Work-Related Contact Time with CGOs.

H23: Voluntary mentoring will be positively related to Mentor self-reports of shared characteristics with CGOs.

III. Methodology

Participants

A brief synopsis of the research proposal and surveys were submitted to HQ AFPC/DPSAS. USAF Survey Control Number 98-30 was issued. Permission to solicit the participation of Aeronautical Systems Center (ASC) officers was granted by the ASC Vice Commander. Participants were company grade officers, their supervisors, and mentors. All respondents were assigned to the Aeronautical Systems Center, Wright-Patterson Air Force Base OH. Participation was strictly voluntary.

Demographic data was requested on each of the questionnaires. The following demographic information was requested from each of the respondent groups: sex, race, military rank or civilian equivalent, source of commission, marital status, highest academic degree earned, highest level of professional military education, mentoring relationship, and common characteristics. Based on data collected from 224 respondents, the typical CGO was a married, white male who had worked 15 months in his current work unit and three and a half years within his Air Force Specialty Code (AFSC). Approximately half of the respondents were captains and the other half were lieutenants. CGOs averaged 29 years-of-age and 40% had graduate degrees. Only 38% of the officers had attended Squadron Officer School. Approximately half of the CGOs reported having mentors. Of the CGOs with mentors, 89% were male officers. The majority of mentors (84%) were also male.

Based on data collected from the 75 returned mentor surveys, 70% of the mentors were military officers ranging from second lieutenant to brigadier general. The majority

of military mentors were field grade officers. The average military mentor was approximately 40 years old with about 7 3/4 years in their AFSC and 1 3/4 years time within his work unit. Civilian mentors ranged from General Schedule (GS) 9 through Senior Executive Service. The typical civilian mentor was a 48-year-old, GS-14, with 12 1/2 years within his current duty position and 5 1/4 years within his current unit. Most mentors (90.7%) were assigned to the same work unit as the CGO and about half (46.7%) of the mentors were also the official raters of the CGO.

From the 338 supervisor surveys returned, 46% of supervisors were military officers ranging in rank from captain to colonel. The average military supervisor was a white, married, lieutenant colonel approximately 41-years-old with a master's degree who had worked in his current unit five years, supervised 48 personnel, and worked in the current AFSC for 8 3/4 years. The average civilian supervisor was a 49-year-old, white, male GS-15 with a master's degree and 11-years tenure in his current unit. The civilian supervisor had an average of 14-years experience in his current position and supervised 25 personnel. See Appendix A for more detailed demographic data for each group.

Survey packages were distributed via the official base mail system in April 1998. Participants were asked to return surveys within two weeks. To encourage participation and ensure anonymity of supervisors, survey packages were mailed to "The Supervisor of (CGO Name)". The survey package mailed to the supervisor contained a questionnaire for the supervisor, cover letter, and survey package addressed to the CGO. The supervisors were instructed to forward the CGO package to the officer identified on the questionnaire. The CGO survey package contained a survey to be completed by the CGO, a cover letter, and survey package pre-addressed for "The Mentor of (CGO

Name)". Each CGO was instructed to forward the mentor survey to his or her mentor if one existed. The CGOs were told that their supervisors were unaware of the mentor questionnaire so they would not feel compelled to identify the supervisor as the mentor. If the CGO did not feel he or she had a mentor, the officer was asked to mark the "No Current Mentor" block on the survey return envelope and to return the unused mentor questionnaire package. Pre-addressed return envelopes were provided for the three participant groups.

Survey packages were mailed to 668 supervisors. A response rate of 51% (N = 338) was obtained from supervisors; 34% (N = 224) from CGOs, and 11% (N = 75) from mentors. Additionally, eight surveys were returned due to incorrect addresses. During the two weeks of data collection, the request for participation was reinforced via a brief message published in the electronically distributed newsletter sponsored by the ASC Company Grade Officer Council.

Expectations of survey participants were explained in the cover letter and front page of each survey booklet. In the event participants had questions regarding the survey or the research effort, contact information was provided in the cover letter and survey booklet.

Instruments

The Supervisor Survey. This 73-item survey was mailed to the supervisors of CGOs assigned to ASC. Supervisors were instructed to answer questions based on their supervisory relationship with the CGO. (See Appendix B for the Supervisor Survey).

Similarity Index. Supervisors were asked to identify, from a list of 13 items, the characteristics believed to be shared with the CGO named on the survey form. The

categories included career field, gender, age, marital status, religion, ethnic background, educational level, commissioning source, anticipation of similar career paths, previous career-related experience, friendship, similar off-duty interests, and association with other family members. The Similarity Index was computed as the frequency of responses for each of the 13 items.

Mentoring Effectiveness. The Mentoring Effectiveness Scale (adapted from Tepper, Shaffer, & Tepper, 1996) is a 21-item, Likert-type scale that measures the supervisor's general tendencies to serve in teaching, counseling, support, and coaching roles with the CGO. Typical items asked the respondent questions such as "Regarding your subordinate, to what extent have you ... served as a role model, encouraged him/her to try new ways of behaving on the job, and encouraged him/her to prepare for advancement?". Supervisors used a five-point scale with anchors of "not at all" (1) and "to a very large extent" (5) to indicate their responses. Mentoring Effectiveness was the average of the responses on the 21 items. The internal consistency (Cronbach's Alpha) of the Mentoring Effectiveness Scale was .92 (N = 322).

Work-Related Contact Time. Nine items were used to solicit inputs regarding the amount of time (hours per week) the supervisor comes in to contact with the CGO during an average week (Van Scotter, 1996). As an example, respondents were asked, "In an average week, how much time do you spend working with this subordinate to complete a task?". Respondents were asked to write-in responses for each of the nine questions. The alpha reliability coefficient was .84 (N = 338).

Performance. The supervisors were asked to rate the job performance of their subordinates using two scales designed to measure the subordinate's performance and

behavior compared to other CGOs and a 3-item scale designed to measure the subordinate's overall performance (Van Scotter, 1996).

The first scale was a 4-item, Likert-type scale asking supervisors to rate the CGO's interpersonal effectiveness, compared to other company grade officers, in helping others, supporting co-workers with problems, cooperating with other CGOs, and in maintaining good working relationships. A seven-point scale with anchors of "much below average" (1) and "much above average" (7) was used ($\alpha = .93$, $N = 331$). Interpersonal Effectiveness was the average of the ratings on these four items.

The second scale was a 4-item, Likert-type scale designed to measure a CGO's dedication to the job. Questions asked supervisors to rate the likelihood that a CGO, compared with other CGOs, would persist to overcome obstacles in completing a task, use self-discipline, take initiative to solve a problem, and perform consistently and reliably. A five-point scale with anchors of "not at all likely" (1) and "exceptionally likely" (5) was used ($\alpha = .92$, $N = 331$). The Job Dedication rating was the average of the ratings on these four items.

The third scale was a 3-item, Likert-type scale asking supervisors to rate the overall performance of the CGO based on contributions made to unit effectiveness, performance of the CGO compared to peers of the same rank, and the degree to which CGO performance met job performance standards. A 1 to 7 scale was used with anchors of "Low" (1 or 2), "Medium" (3, 4, or 5), and "High" (6 or 7) ($\alpha = .95$, $N = 332$). Overall Performance was the average of the ratings on these three items.

Exposure to Mentoring. The final section asked supervisors if they had received mentoring training, read publications regarding mentoring, had knowledge of the Air

Force Mentoring Program, or were familiar with organizations or groups fostering or encouraging mentoring. Respondents answered these four questions with "yes" or "no". The scale score was computed by averaging responses (no = 0, yes = 1). The alpha reliability coefficient was calculated as .44 (N = 337).

The Company Grade Officer Survey. This 111-item survey was mailed to the supervisors of CGOs, who, in turn, forwarded the surveys to the CGOs. CGOs answered questions about barriers to mentoring, the mentoring process, and their relationship with their mentors if they had one at the time of data collection. (See Appendix C for the Company Grade Officer Survey).

Similarity Index. CGOs were asked to identify, from a list of 13 items, the characteristics believed to be shared with the mentor (or supervisor if the CGO did not have a mentor) in the mentoring relationship such as gender, marital status, and anticipation of similar career path.. This scale was also used in the Supervisor and Mentor surveys. The Similarity Index was computed as the frequency of responses for each of the 13 items.

Work-Related Contact Time. Nine items from Van Scotter (1996) were used to solicit inputs regarding the amount of time (hours per week) the CGO comes in contact with the supervisor (or mentor) during an average week. This scale was also used in the Supervisor and Mentor surveys. The alpha reliability coefficient was .88 (N = 224).

Mentoring Effectiveness. The Mentoring Effectiveness Scale (adapted from Tepper, Shaffer, & Tepper, 1996) is a 21-item, Likert-type scale that measures the CGO's perceptions of the supervisor or mentor's effectiveness in teaching, counseling, support, and coaching roles with the CGO. CGOs used a five-point scale with anchors of "not at

all" (1) and "to a very large extent" (5) to indicate their responses. This section was completed only by CGOs who said they were being mentored. Respondents who were not involved in a mentoring relationship did not complete this scale. The alpha reliability coefficient was .92 (N = 111).

Barriers to Mentoring. Another scale (Ragins & Cotton, 1991, pp. 944-945) was used to assess the CGO and mentors' perceptions regarding barriers to obtaining and initiating mentoring relationships. Participants used a seven-point scale with anchors of "strongly disagree" (1) and "strongly agree" (7) to respond. The first subscale, Barriers to Obtaining a Mentoring Relationship, is a 12-item, Likert-type scale. A typical item was, "In the past, I have been prevented from obtaining a mentoring relationship because of the lack of opportunity to develop relationships with potential mentors." The second subscale, Barriers to Initiating a Mentoring Relationship, is a 9-item, Likert-type scale. A typical item was, "In the past, I have been prevented from initiating a mentoring relationship because I am uncomfortable taking an assertive role in approaching a potential mentor." Four items were added to the 17-item scale developed by Ragins and Cotton (1991). These items included: "In the past, I have been prevented from obtaining a mentoring relationship because ... 1) potential mentors are unwilling to develop a relationship with me because of *their gender*, 2) potential mentors are unwilling to develop a relationship with me because of *their race*, 3) potential mentors are unwilling to develop a relationship with me because of *my gender*, and 4) potential mentors are unwilling to develop a relationship with me because of *my race*". Appropriate items were averaged to form the score for each scale. Reliability coefficients were calculated for individual subscales as well as the entire scale. These alpha reliability coefficients

were: Barriers to Obtaining Mentoring ($\alpha = .89$, $N = 174$), Barriers to Initiating Mentoring ($\alpha = .86$, $N = 177$), and the Overall Barriers to Mentoring Scale for the CGOs ($\alpha = .92$, $N = 177$). The Overall Barriers to Mentoring Scale was primarily used for data analysis, however, specific items from the Barriers to Initiating and Barriers to Obtaining Scales were used for some comparisons.

Proactive Personality Scale. This 4-item, Likert-type scale (adapted from Bateman & Crant, 1993) measures the CGO's general tendencies toward scanning for opportunities, taking initiative, and persevering in job-related situations using a seven-point scale with anchors of "strongly disagree" (1) and "strongly agree" (7), ($\alpha = .74$, $N = 192$). A Proactive Personality score was computed by averaging responses on the four items.

Sense of Competence Scale. This 13-item, Likert-type scale measures the respondent's comfort level with technical skills and job-related knowledge using a seven-point scale with anchors of "strongly disagree" (1) and "strongly agree" (7) (Wagner & Morse, 1975). The Sense of Competence score was calculated by averaging the responses from the 13 items. The alpha reliability coefficient was calculated to be .78 ($N = 188$).

Leader/Member Exchange. This six-item, Likert-type scale measures the CGO's perceptions of the quality of his/her relationships with the supervisor using a seven-point scale with anchors of "strongly disagree" (1) and "strongly agree" (7), (Scandura and Graen, 1984). Examples of questions included: "My working relationship with my supervisor is effective," and "My supervisor seems to understand my problems and

needs". The alpha reliability coefficient was calculated as .87 (N = 191). An overall LMX score was computed as the average of responses on these six items.

Exposure to Mentoring. The final section of the survey asked CGOs to indicate if they had received mentoring training, read publications regarding mentoring, had knowledge of the Air Force Mentoring Program, or were familiar with organizations or groups fostering or encouraging mentoring. This scale was also used in the Supervisor and Mentor surveys. Respondents answered these four questions with "yes" or "no". The scale score was computed by averaging responses (no = 0, yes = 1). The alpha reliability coefficient was calculated as .51 (N = 204).

The Mentor Survey. This 116-item survey was distributed by CGOs to individuals they considered to be their mentors. Seventy-five completed surveys were returned. Mentors were asked to answer questions about the mentoring process and their relationship with the CGO. (See Appendix D for the Mentor Survey).

Similarity Index. Mentors were asked to identify, from a list of 13 items, the characteristics believed to be shared with the CGO in the mentoring relationship. Examples of items included: gender, age, anticipation of similar career path, and marital status. This scale was also used in Supervisor and CGO surveys. The Similarity Index was computed as the frequency of responses for each of the 13 items.

Work-Related Contact Time. This section of the survey (Van Scotter, 1996) solicited inputs regarding the amount of time (hours per week) the mentor comes in contact with the CGO during an average week. This scale was also used in Supervisor and CGO surveys. The alpha reliability coefficient was .84 (N = 75).

Mentoring Effectiveness. This scale is a 21-item, Likert-type scale that measures the mentor's general tendencies to serve in teaching, counseling, support, and coaching roles with the CGO (adapted from Tepper, Shaffer, & Tepper, 1996). The mentors used a five-point scale with anchors of "not at all" (1) and "to a very large extent" (5) to indicate their responses. This scale was also used in Supervisor and CGO surveys. The alpha reliability coefficient was .91 (N = .73). Mentoring Effectiveness was the average of responses on the 21 items.

Barriers to Mentoring. One scale, subdivided into two scales, was used to assess the mentor's perceptions regarding possible barriers to obtaining and initiating mentoring relationships (Ragins & Cotton, 1991). The first subscale, Barriers to Obtaining a Mentoring Relationship, is a 12-item, Likert-type scale and the second subscale, Barriers to Initiating a Mentoring Relationship, is a 9-item, Likert-type scale. This scale was also used in the CGO surveys. Appropriate items were averaged to form the score for each scale. These alpha reliability coefficients were: Barriers to Initiating Mentoring ($\alpha = .94$, N = .71), Barriers to Obtaining Mentoring ($\alpha = .91$, N = .73), and for Barriers to Mentoring ($\alpha = .96$, N = .71). The Overall Barriers to Mentoring Scale was primarily used for data analysis, however, specific items from the Barriers to Initiating and Barriers to Obtaining Scales were used for some comparisons.

Role Ambiguity Scale. This scale is a 6-item, Likert-type scale that measures the extent to which the respondent understood his or her job-related responsibilities. An example of an item was, "I know exactly what is expected of me in my job." Respondents answered using a seven-point scale with anchors of "strongly disagree" (1)

and "strongly agree" (7) (Rizzo, House, & Lirtzman, 1970). Role Ambiguity was the average of the six items. The alpha reliability coefficient was .90 (N = .74).

Reasons for Mentoring. Respondents were asked six questions regarding their reasons for deciding to be a mentor as well as reasons for selecting the specific officer to mentor. The questions were written for this study. The questions asking why the individual decided to be a mentor included: 1) I wanted to do it; 2) I thought I had to do it; and 3) I was directed to do it. Questions asking the individual why she/he picked this person to mentor included: 1) I wanted to do it; 2) I thought I had to do it; and 3) I was directed to do it. Responses were measured using a seven-point scale with anchors of "strongly disagree" (1) and "strongly agree" (7). These items were used individually in data analysis and also to evaluate "voluntary" and "assigned" mentoring status. "Voluntary" status was determined by averaging scores on the question, "I wanted to do it", for reasons for mentoring and reasons for protégé selection. Likewise, "Assigned" status was determined by averaging scores on the question, "I thought I had to do it", for reasons for mentoring and reasons for protégé selection..

Perceptions of Risk. Mentors were asked six questions regarding their perceptions of risks associated with mentoring the CGO based on risks discussed by Ragins and Scandura (1994). Responses were indicated on a seven-point scale with anchors of "strongly disagree" (1) and "strongly agree" (7). The questions were developed for this study. The questions asked the respondent, "Has mentoring this person put you at risk because... 1) your mentoree's poor performance may reflect on you; 2) your mentoree takes time away from doing other things that would advance your career; 3) of gossip in the workplace regarding potential favoritism toward mentoree; 4) of possible perceptions

of an unprofessional relationship; 5), your mentoree's social behaviors (manners, dress, habits, etc.) may reflect on you, and 6) your mentoree might falsely report improper behavior?". A total score was computed by averaging the responses on the six questions. The alpha reliability coefficient was .88 (N = .74).

Exposure to Mentoring. The final section asked respondents to indicate if they had received mentoring training, read publications regarding mentoring, had knowledge of the Air Force Mentoring Program, or were familiar with organizations or groups fostering or encouraging mentoring. Respondents answered these four questions with "yes" or "no". This scale was also used in the Supervisor and CGO surveys. The scale score was computed by averaging responses (no = 0, yes = 1). The alpha reliability coefficient was calculated as .42 (N = 74).

To ensure CGO, Supervisor, and Mentor surveys could be matched, all questionnaires and return envelopes in each survey package were pre-coded with a unique identification number. This identification system allowed the researcher to match returned surveys from supervisors and mentors with the appropriate CGO while also protecting the privacy of all parties.

Analyses

The researcher manually coded and entered all data. Reliability tests were computed for each of the scales and subscales. Hypotheses were tested using Pearson Product Moment Correlations to assess degrees of association among different scales. Independent sample t-tests were computed for calculations to test for differences in means scores by different groups on scales and individual items with scales. Frequencies were calculated for each group's demographic characteristics.

IV. Results and Analysis

Overview

The effectiveness of mentoring has been related to age, rank, organizational tenure (Ragins & Scandura, 1994), race (Thomas, 1990), gender (Dreher & Cox, 1996), job performance (Cook, 1987; Kram, 1985), and personality characteristics of protégés and mentors (Turban & Dougherty, 1994). Some areas that have not been addressed previously in the literature include differences in perceptions of Mentoring Effectiveness and Barriers to Mentoring experienced by CGOs with Supervisory and Non-Supervisory Mentors, Work-Related Contact Time spent between CGOs and Mentors, Exposure to Mentoring Training, and differences in mentoring effectiveness reported by mentors in voluntary and assigned mentoring relationships. Results regarding Mentoring Effectiveness and Barriers to Mentoring will be presented from the CGO and Mentor perspective. The effectiveness of Assigned and Voluntary mentoring will be presented from the Mentor perspective. For clarification purposes, categories of respondents will be capitalized (i.e., Supervisory Mentor, CGOs with Mentors).

Factors Influencing Mentoring Effectiveness

Correlation results reported in Table 1 represent relationships theorized to impact mentoring effectiveness. Results were based on data collected from CGOs with Mentors. Four items, CGO race, gender, Exposure to Mentoring Training, and shared characteristics with mentor (Similarity Index), did not produce statistically significant results with Mentoring Effectiveness and failed to support previous research (Burke, McKeen & McKenna, 1993; Dreher & Cox, 1996; Thomas, 1990) suggesting these

Table 1

Factors Influencing Mentoring Effectiveness (as reported by CGOs with Mentors)

Factor	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1. Mentoring Effectiveness	106	3.32	.68	1	-.26**	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26		
2. Mentor Supervisor Status	111	0.5	0.5	1	.63**	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	-.18*	
3. Mentor Rating Status	61	0.56	0.5	1	-.30**	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	-.26	
4. Difference in Rank	58	2.69	1.31	1	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	
5. Length of Relationship	111	15.4	15.8	1	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	-.28*	
6. Exposure to Mentoring	83	2.61	1.2	1	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	-.27**	
7. Exposure to Mentoring	61	2.56	1.15	1	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*
8. Exposure to Mentoring	111	2.43	1.19	1	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*	-.26*
9. Assigned Mentoring	57	2.33	1.66	1	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**	-.60**
10. Voluntary Mentoring	59	5.87	1.21	1	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**	-.47**
11. Contact Time	83	5.29	5.3	1	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**	-.38**
12. Contact Time	61	5.49	6.11	1	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*
13. Contact Time	111	5.1	6.04	1	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	.49**	
14. Similarity Index	111	4.5	2.21	1	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*
15. Role Ambiguity	61	5.52	1.04	1	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*	-.17*
16. Sense of Competence	106	4.72	0.83	1	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**	-.43**
17. Proactive Personality	108	5.31	0.91	1	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*	-.27*
18. LMX	106	5.42	0.93	1	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*	-.23*
19. CGO Rank	111	0.47	0.5	1	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*	-.22*
20. CGO Race	109	1.65	0.76	1	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*
21. Interpersonal Effectiveness	83	5.86	0.93	1	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*
22. Job Dedication	83	4.27	0.78	1	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*	-.24*
23. Overall Performance	83	5.77	1.06	1	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*	-.21*
24. Perceptions of Risk	61	1.69	0.83	1	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	-.65**	
25. CGO Sex	110	0.16	0.37	1	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*	-.19*

*Correlation is significant at the 0.01 level (1-tailed)

1. Scale average (as reported by CGOs)

2. 0 = Rating Mentor, 1 = Non-rating Mentor

3. Difference in Grade = Mentor Rank - CGO Rank

4. Average of Total Months

5. Average of four mentoring-related items as reported by Supervisors (Questions 68-71 on Supervisor Survey)

6. Average of four mentoring-related items as reported by Mentors (Questions 111-114 on Mentor Survey)

7. Average of four mentoring-related items as reported by CGOs (Questions 106-109 on CGO Survey)

8. Average of responses on two questions (I wanted to become a mentor. & I wanted to mentor this person.)

9. Average of responses on two questions (I was directed to mentor. & I was directed to mentor this person.)

10. Average of responses on two questions (I was directed to mentor. & I was directed to mentor this person.)

11. Work-related Contact Time Scale average as reported by Supervisors

12. Work-related Contact Time Scale average as reported by Mentors

13. Work-related Contact Time Scale average as reported by CGOs

14. Similarity Index Scale average as reported by CGOs

15. Role Ambiguity Scale average as reported by CGOs

16. Scale average as reported by CGOs

17. Scale average as reported by CGOs

18. Scale average as reported by CGOs

19. 0 = White, 1 = Non-white

20. 0 = Lieutenants, 1 = Captains

21. As rated by Supervisors of CGOs

22. As rated by Mentors of CGOs

23. As rated by Supervisors of CGOs

factors should influence perceptions of Mentoring Effectiveness from the protégé perspective. These findings failed to support Hypotheses 8 and 9.

H8: Mentoring Effectiveness, as reported by CGOs, will be positively related to CGO self-reports of Exposure to Mentoring.

H9: Mentoring Effectiveness, as reported by CGOs, will be positively related to shared characteristics with Mentor.

This discussion will examine only factors that produced statistically significant results when analyzed from the CGO, Supervisory Mentor, and Non-Supervisory Mentor perspectives. Three categories of CGOs will be used to report results from the CGO perspective. These categories include CGOs with Supervisory Mentors (CGO indicated supervisor was also mentor), CGO with a Non-Supervisory Mentor (CGO has a mentor, but the mentor was not the supervisor), and a CGO without a Mentor. Results reported from the Supervisory Survey will be reported as Supervisory Mentor or Non-Supervisory Mentor (as indicated by the Supervisor). Results reported from the Mentor Survey will be reported as Rating Mentor and Non-Rating Mentor (as indicated by the Mentor) (Rating Mentor and Supervisory Mentor are considered synonymous terms).

CGO Perspective. Seven factors produced statistically significant relationships with CGO with Mentors' self-reports of Mentoring Effectiveness (Table 1). These factors included: Mentor Supervisory Status, Work-Related Contact-Time, Sense of Competence, Proactive Personality, Leader/Member Exchange, CGO Rank, and CGO Interpersonal Effectiveness. The statistically significant, negative correlation between Mentor's Supervisory Status and CGO self-reports of Mentoring Effectiveness ($r = -.26^{**}$, $p < .01$, $N = 111$) indicates CGOs with Supervisory Mentors were more likely to

report having an effective mentoring relationship than CGOs with Non-Supervisory Mentors. Based on this information, independent sample t-tests were used to examine difference in mean scores on the other scales measuring factors believed to impact Mentoring Effectiveness for CGOs with Supervisory and Non-Supervisory Mentors (see Table 2). To provide additional insight, scores were also reported for CGOs without Mentors.

Table 2
Comparison of Mean CGO Responses on Mentoring Variables

Factor	CGOs Without Mentors (A)			CGOs with Supervisory Mentors (B)			CGOs with Non-Supervisory Mentors (C)			Observed t-value between Supervisory and Non-Supervisory Mentors
	M	SD	N	M	SD	N	M	SD	N	
Mentoring Effectiveness	Not Applicable			3.49	.56	52	3.15	.74	54	2.73**
Barriers to Obtaining Mentoring	2.86	.86	71	2.48	1.07	52	2.57	1.11	51	-.41
Barriers to Initiating Mentoring	2.76	.92	73	2.44	.98	53	2.70	1.24	51	-.12
Barriers to Mentoring	2.78	.81	69	2.46	.98	52	2.62	1.07	51	-.78
Exposure to Mentoring	.29	.24	94	.36	.31	55	.42	.29	.56	-.83
Proactive Personality	5.34	.74	84	5.41	.77	54	5.22	1.02	54	1.09
LMX	5.10	1.06	85	5.71	.73	53	5.13	1.03	53	3.38**
Sense of Competence	4.71	.76	82	4.70	.76	55	4.73	.90	53	-.15
Interpersonal Effectiveness	5.52	1.26	84	5.88	.85	43	5.84	1.01	40	.20
Job Dedication	4.18	.94	84	4.34	.67	43	4.19	.89	40	.90
Overall Job Performance	5.54	1.23	84	5.75	1.05	43	5.79	1.08	40	-.17
Contact Time	Not Applicable			6.37	6.20	55	3.86	5.65	56	2.21**
Similarity Index	Not Applicable			4.18	2.09	55	4.82	2.29	56	-1.16

*Indicates mean differences are significant at $p < 0.05$ (1-tailed).

**Indicates mean differences are significant at $p < 0.01$ (1-tailed).

CGOs with Supervisory Mentors reported higher, statistically significant mean scores than CGOs with Non-Supervisory Mentors on the Mentoring Effectiveness Scale, the Leader/Member Exchange Scale, and Work-Related Contact Time. As a preliminary measure, these results suggest CGOs with Supervisory Mentors are more likely to report higher levels of mentoring effectiveness than CGOs with Non-Supervisory Mentors. Furthermore, CGOs with Supervisory Mentors reported spending more contact time and having a higher quality relationship with their Supervisory Mentors than CGOs with Non-Supervisory Mentors. The higher Similarity Index score for CGOs with Non-Supervisory Mentors is consistent with literature (Burke, McKeen, & McKenna, 1993) as a protégé involved in a voluntary mentoring relationship is more likely to seek a mentor with shared characteristics, and vice versa.

CGO Self-Reports of Mentoring Effectiveness and Mentor Status. As reported in Table 1, CGOs with Mentors reported a statistically significant, negative relationship with Mentoring Effectiveness and Mentor's Supervisory Status ($r = -.26^{**}$, $p < .01$, $N = 111$). As Supervisory Mentor was coded "0", this correlation means that CGOs with Supervisory Mentors reported a higher Mentoring Effectiveness Score than CGOs with Non-Supervisory Mentors. Based on the results from Table 2 indicating a statistically significant difference in mean scores existed between CGOs with Supervisory and Non-Supervisory Mentors, independent sample t-tests were used to test for differences in means on the 21 items comprising the scale (see Table 3).

Table 3

Mean Scores for CGO Self-Reports of Mentoring Effectiveness with Supervisory and Non-Supervisory Mentors

Factor (Items 1 - 21 are items from Mentoring Effectiveness Scale)	CGOs with Supervisory Mentors (N = 55)	CGOs with Non- Supervisory Mentors (N = 56)	Observed t-value
<i>To what extent has your mentor...</i>			
1. Encouraged you to try new ways of behaving on the job?	2.56	2.54	.12
2. Discussed your questions or concerns regarding feelings of competence, commitment to advancement, relationships with peers and supervisors or work/family conflicts?	3.05	3.29	-1.15
3. Served as a role model?	3.84	4.13	-1.74 *
4. Demonstrated good listening skills in your conversations?	4.20	4.06	.90
5. Conveyed feelings of respect for you as an individual?	4.33	4.30	.21
6. Encouraged you to talk openly about anxieties and fears that detract from your work?	3.29	3.32	-.14
7. Shared personal experiences as an alternative perspective to your problem?	3.56	3.79	-1.18
8. Displayed attitudes and values similar to your own?	3.84	3.96	-.71
9. Assigned responsibilities to you that increased your contact with people who will judge your potential for future advancement?	4.00	3.07	4.07 **
10. Reduced unnecessary risks that could have increased your opportunities for promotion?	3.22	2.72	2.15 **
11. Helped you meet new colleagues?	3.31	3.25	.26
12. Given you projects that present opportunities to learn new skills?	3.91	3.04	3.76 **
13. Helped you finish projects or tasks to meet deadlines that otherwise would have been difficult to complete?	2.93	2.36	2.33 **
14. Encouraged you to prepare for advancement?	3.82	3.69	.68
15. Given you projects that present opportunities to learn new skills?	3.80	2.96	3.57 **
16. Given you projects that increased your contact with higher level managers?	3.76	2.85	3.93 **
17. Protected you from working with other managers or work units before you knew about their likes/dislikes, opinions on controversial topics, and the nature of the political environment?	2.75	2.01	3.57 **
18. Kept you informed about what is going on at higher levels in the organization or how external conditions are influencing the organization?	3.62	3.05	2.58 **
19. Provided support and feedback regarding your performance as an officer?	3.95	3.00	4.51 **
20. Given you projects that increased written and personal contact with senior officers?	3.60	2.51	5.01 **
21. Interacted with you socially outside of work?	2.15	2.33	-.81
22. Mentoring Effectiveness Scale	3.49	3.15	2.73 **

Note: The response format for all items is as follows: *not at all*=1, *to a slight extent*=2, *to some extent*=3, *to a large extent*=4, *to a very large extent*=5. * Indicates mean differences are significant at $p < 0.05$. ** Indicates mean differences are significant at $p < 0.01$.

Statistically significant difference in mean scores resulted for 11 individual scale items (as indicated by asterisks) for the Supervisory/Non-Supervisory Mentor comparisons. CGOs with Supervisory Mentors reported higher scores for all statistically significant items except “to what extent has your mentor served as a role model” than Non-Supervisory Mentors. Items 1 through 8 represent psychosocial mentoring functions and items 9 through 21 represent career-related mentoring functions (Tepper, Shaffer, and Tepper, 1996). The majority of items producing statistically significant relationships between CGOs with Supervisory and Non-Supervisory Mentors represented career-related mentoring functions. CGOs may attribute these work-related activities as being more related to effective mentoring when the mentor is also serving in a supervisory capacity. Regardless of personal motivations for selecting mentors within or outside their chains-of-command, CGOs believed they were engaged in effective mentoring relationships.

CGO Self-Reports of Mentoring Effectiveness and Work-Related Contact Time.

A statistically significant, positive correlation was reported by CGOs with Mentors and Work-Related Contact Time in Table 1 ($r = .36^{**}$, $p < .01$, $N = 111$). As a statistically significant difference in Work-Related Contact Time scores between CGOs with Supervisory and Non-Supervisory Mentors was reported in Table 3, further analysis of Mentor's Status and Work-Related Contact Time was warranted. Correlations between CGO self-reports of Mentoring Effectiveness and Work-Related Contact Time between CGOs with Supervisory Mentors and Non-Supervisory Mentors are reported in Table 4.

Table 4

Correlations of CGO Self-Reports of Mentoring Effectiveness and Work-Related ContactTime with Supervisory and Non-Supervisory Mentors

Factor: CGO Self-Reports of Work-Related Contact Time	CGO Self-Reports of Mentoring Effectiveness with Supervisory Mentors (N = 52)	CGOs Self-Reports of Mentoring Effectiveness with Non-Supervisory Mentors (N = 54)
<i>In an average week, how much time does your mentor spend ...</i>		
1. coming in contact with at work?	.25*	.30*
2. discussing job-related problems with you?	.24*	.29*
3. observing you performing daily tasks?	.23	.33**
4. working with you to complete tasks?	.19	.23
5. seeing the results of your work?	.29*	.30*
6. monitoring your progress?	.19	.37**
7. coming in contact with you outside of work?	.24*	.21
8. observing you performing a briefing for superiors, subordinates, or peers?	.31*	.13
9. reading material you have written?	.25	.37**
10. Average Work-Related Contact Time	.30*	.36*

*Correlation is significant at the 0.05 level (1-tailed).

**Correlation is significant at the 0.01 level (1-tailed).

For CGOs with Supervisory and Non-Supervisory Mentors, the average Work-Related Contact Time spent, as reported by the CGO, appeared to contribute to the CGO's perception of the effectiveness of the mentoring relationship ($r = .30^*$, $p < .05$, $N = 52$, $r = .36^*$, $p < .05$, $N = 54$, respectively). For correlations between each of the nine items comprising the Work-Related Contact Scale and Mentoring Effectiveness, as reported by CGOs, one item, "working with you to complete tasks", did not result in a statistically significant relationship with either mentor category. For three items identified in Table 4, "observing you performing daily tasks", "monitoring your progress", and "reading material you have written", correlations were statistically significant for Non-Supervisory Mentors, yet these items did not result in statistically significant correlations for CGOs with Supervisory Mentors. This relationship suggests

that when a CGO's mentor is outside the chain-of-command, these "supervisory" functions seemed to contribute more to the CGO's perception of effective mentoring. As the correlation results supported the value of Work-Related Contact Time and Mentoring Effectiveness, a further analysis was conducted using independent sample t-tests to test for differences in means between actual Work-Related Contact-time spent with Supervisory Mentors and Non-Supervisory Mentors. Results are reported in Table 5.

Table 5
Mean Scores of CGO Self-Reports of Actual Work-Related Contact Time with Supervisory and Non-Supervisory Mentors

Factor:	CGOs with Supervisory Mentors Mean (hours) (N = 55)	CGOs with Non-Supervisory Mentors Mean (hours) (N = 56)	Observed t-value
<i>In an average week, how much time does your mentor spend...</i>			
1. coming in contact with at work?	14.97	9.03	2.33**
2. discussing job-related problems with you?	5.95	4.14	1.37
3. observing you performing daily tasks?	10.94	6.42	1.87*
4. working with you to complete tasks?	3.84	2.70	1.11
5. seeing the results of your work?	9.76	5.12	2.23*
6. monitoring your progress?	7.23	4.20	1.58
7. coming in contact with you outside of work?	.62	1.11	-1.39
8. observing you performing a briefing for superiors, subordinates, or peers?	1.23	.88	1.02
9. reading material you have written?	2.72	1.15	2.68**
10. Average Work-Related Contact Time	6.36	3.56	2.22**

*Indicates mean differences are significant at the $p < 0.05$ level (1-tailed).

**Indicates mean differences are significant at the $p < 0.01$ level (1-tailed).

Five items had statistically significant differences in means. These items were: "coming in contact with you at work", "observing you performing daily tasks", "seeing the results of your work", "reading material you have written", and "overall average contact time". CGOs reported spending more time with Supervisory Mentors than Non-Supervisory Mentors on these items.

Although these results, which coincide with previous research by Allen, Poteet, & Burroughs (1997), might indicate mentoring relationships with Non-Supervisory Mentors

may be more effective than a mentoring relationship with a Supervisory Mentor, caution should be used in reaching this conclusion due to the population sizes (N = 55 & 56, respectively). Both groups believed Work-Related Contact Time positively influenced mentoring effectiveness, however, the difference in amount of contact time indicates the nature and quality of contact time spent with Supervisory and Non-Supervisory Mentors need to be further studied to better understand their contributions toward mentoring effectiveness. These results fully support Hypothesis 6.

H6: Mentoring Effectiveness, as reported by CGOs, will be positively related to CGO self-reports of Work-Related Contact Time with Mentors.

CGO Self-Reports of Sense of Competence, LMX, Proactive Personality, and Mentoring Effectiveness. Based on results from Table 1, three protégé characteristics thought to influence Mentoring Effectiveness resulted in statistically significant correlations. These factors included Sense of Competence ($r = .40^{**}$, $p < .01$, $N = 106$), Proactive Personality ($r = .31^{**}$, $p < .05$, $N = 108$), and Leader/Member Exchange ($r = .26^{**}$, $p < .01$, $N = 106$). Leader/Member Exchange also resulted in statistically significant correlations with Mentor's Supervisor Status ($r = -.31^{**}$, $p < .01$, $N = 106$) indicating the quality of a communication relationship may influence the CGO to select the supervisor as the mentor. These results fully support Hypothesis 7.

H7: Mentoring Effectiveness, as reported by CGOs, will be positively related to CGO self-reports of Sense of Competence, Leader/Member Exchange, and Proactive Personality.

To determine if Mentor's Supervisory Status could provide more insight into the relationships between Sense of Competence, LMX, Proactive Personality, and CGO self-

reports of Mentoring Effectiveness, correlations were computed between CGOs with Supervisory Mentors and Non-Supervisory Mentors and Sense of Competence, Proactive Personality, and LMX. Results are reported in Table 6.

Table 6

Correlations of CGO Self-Reports of Mentoring Effectiveness, Leader/Member Exchange, Proactive Personality, and Sense of Competence

Sub-scale	1	2	3	4
Supervisory Mentors (N = 51)				
1. Mentoring Effectiveness	--	.36**	.23	.45**
2. Sense of Competence	--		.26*	.35**
3. Proactive Personality			--	.35**
4. LMX				--
Non-Supervisory Mentors (N = 53)				
1. Mentoring Effectiveness	--	.46**	.34**	.07
2. Sense of Competence	--		.55**	.11
3. Proactive Personality			--	.12
4. LMX				--

*Correlation is significant at the 0.05 level (1-tailed).

**Correlation is significant at the 0.01 level (1-tailed).

Both categories of CGOs reported a statistically significant, positive relationship with Sense of Competence and CGO self-reports of Mentoring Effectiveness. CGOs with Non-Supervisory Mentors reported a statistically significant, positive correlation between Mentoring Effectiveness and Proactive Personality ($r = .34**$, $p < .01$, $N = 53$). Only CGOs with Supervisory Mentors reported a statistically significant relationship between CGO self-reports of Mentoring and Effectiveness and LMX ($r = .45**$, $p < .01$, $N = 51$). As Proactive Personality is only statistically significant for CGOs with Non-

Supervisory Mentors, this characteristic may be an indicator of Mentoring Effectiveness when the mentor is outside the CGO's chain of command. A CGO demonstrating this characteristic may be more willing to scan the environment for other mentoring opportunities. Results also indicated a superior-subordinate mentoring relationship may provide more opportunities for dialogues and "high quality" communication as the role of the supervisor would normally entail communicating with the subordinate to assign tasks, providing performance feedback, and observing the performance of daily mission requirements. The key to an effective mentoring relationship with a Supervisory Mentor appears to be the quality of LMX shared between the CGO and Supervisory Mentor as well as the CGO's Sense of Competence. These results are similar to those reported by Turban and Dougherty (1994).

CGO Rank and Mentoring Effectiveness. Correlation results from Table 1 indicate CGO Rank is positively correlated with CGO self-reports of Mentoring Effectiveness ($r = .18^*$, $p < .05$, $N = 106$). As described in the notes below Table 1, all lieutenants were coded with "0" and captains were coded as "1". This statistically significant, positive relationship means that the more senior a CGO is in rank, the more likely the mentoring relationship will be considered effective by the CGO. Of the 111 CGOs with Mentors, 17 were second lieutenants, 42 were first lieutenants, and 52 were captains. After recoding, lieutenants and captains accounted for 53% and 47%, respectively.

CGO Rank also resulted in statistically significant correlations with Mentor's Supervisor Status ($r = -.19^*$, $p < .05$, $N = 111$), Work-Related Contact Time reported by Mentors ($r = -.24^*$, $p < .05$, $N = 111$), and Sense of Competence ($r = .21^*$, $p < .05$, $N = 111$). The positive correlation between CGO Rank and Sense of Competence indicates

more senior CGOs are more likely to demonstrate job-related competence. The statistically significant, negative correlation between CGO Rank and Mentor's Supervisor Status indicate that lieutenants are more likely to have Non-Supervisory Mentors than Supervisory Mentors. Of the 111 CGOs with Mentors, 41% of lieutenants and 60% of captains had Supervisory Mentors and the remaining 59% of lieutenants and 40% of captains had Non-Supervisory Mentors.

The negative, statistically significant correlation with CGO Rank and Work-Related Contact Time, as reported by Mentors, indicated mentors spent more time with lieutenants than captains. As results suggested lieutenants were more likely to have Non-Supervisory Mentors, and Mentors spent more time with lieutenants, independent sample t-tests were computed for CGOs with Rating and Non-Rating Mentors and Work-Related Contact Time reported by Mentors to see if differences did exist. (Rating and Non-Rating Mentor terminology from the Mentor Survey is equivalent to Supervisory and Non-Supervisory Mentor terminology from the Supervisory Survey). No statistically significant differences resulted. When an independent sample t-test was computed between Work-Related Contact Time, as reported by mentors, and lieutenants and captains with mentors (All CGOs with Mentors), a statistically significant difference resulted at the 0.05 level. Mentors reported spending an average of 6.53 hours per week with lieutenants ($N = 40$) and an average 3.51 hours per week with captains ($N = 21$). CGO Rank appears to have more impact on Work-Related Contact Time than Mentor Status.

CGO Rank was also correlated with Mentor Perceptions of Risk ($r = .34^*$, $p < .01$, $N = 61$, Table 1). These results indicated mentors perceive fewer risks when CGOs were

lieutenants instead of captains. (A low score on the Perceptions of Risk Scale indicates low risk). The category "lieutenants" consists of officers in a four-year window where "captains" have up to 12 years of experience. As mentors are spending more time with lieutenants and reporting fewer risks, mentors may be less tolerant of poor performance from captains as opposed to lieutenants and consider the captains more of a risk. Allen, Poteet, and Burroughs (1997) found that mentors were motivated by the perception that a potential protégé may need help and direction. Military mentors may believe this to be true of lieutenants, but they may be wary of captains requiring too much attention.

The Mentor Perspective. This portion of the study evaluated Mentoring Effectiveness from the Mentor's perspective. Table 7 represents factors thought to influence perceptions of Mentoring Effectiveness based on previous mentoring-related research. As depicted in Table 7, seven factors produced statistically significant results with Mentor self-reports of Mentoring Effectiveness. The factors included Mentor's Rating Status (Rating or Non-Rating Mentor), Work-Related Contact Time with CGO, Length of the Mentoring Relationship, Voluntary Selection of Protégé, Interpersonal Effectiveness, Job Dedication, and Overall Performance. Results failed to support Hypotheses 12, 13, 14, and 15.

H12: Mentoring Effectiveness, as reported by Mentors, will be positively related to CGO self-reports of Sense of Competence, Leader/Member Exchange, and Proactive Personality.

H13: Mentoring Effectiveness, as reported by Mentors, will be positively related to Mentor self-reports of Exposure to Mentoring.

H14: Mentoring Effectiveness, as reported by Mentors, will be negatively related to Mentor self-reports of Perceptions of Risk.

Table 7

Factors Influencing Mentoring Effectiveness from the Mentor Perspective

Factor	M	SD	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. Mentoring Effectiveness	3.14	0.66	75	1																						
2. Perceptions of Risk	1.66	0.8	75	1																						
3. Role Ambiguity	5.36	0.99	75	1																						
4. CGO PPS	5.33	0.84	92	1																						
5. CGO SOC	4.72	0.8	188	1																						
6. CGO LMX	5.28	1	191	1																						
7. Difference in Rank	2.67	1.31	61	1																						
8. Work-related Contact	5.3	5.88	75	1																						
9. Exposure to Mentoring	0.35	0.27	74	1																						
10. Assigned Mentoring	2.22	1.55	71	1																						
11. Voluntary Mentoring	5.88	1.13	73	1																						
12. Mentor's Rater Status	0.53	0.5	75	1																						
13. Length of Relationship	28.3	45.5	56	1																						
14. Tenure in Unit	12.1	8.48	75	1																						
15. Sex of Protégé	0.15	0.36	75	1																						
16. Time in AFSC	9.08	7.58	71	1																						
17. Rank of Protégé	0.47	0.5	215	1																						
18. Race of Protégé	0.17	0.38	213	1																						
19. Civilian or Military	0.29	0.46	72	1																						
20. Similarity Index	4.15	2.14	75	1																						
21. Interpersonal Effectiveness	5.61	0.12	338	1																						
22. Job Dedication	4.13	0.94	338	1																						
23. Overall Performance	5.57	1.26	338	1																						

*Correlation is significant at the 0.01 level (1-tailed)

1. As reported by Mentors
2. As reported by Mentors
3. As reported by Mentors
4. As reported by CGOs
5. As reported by CGOs
6. As reported by CGOs
7. Difference equals Mentor Rank - CGO Rank
8. Scale average (reported by Mentors)
9. Sum of four items
10. (I was directed to do it)
11. (I wanted to do it), (I wanted to mentor this person)
12. (0 = Rating Mentor, 1 = Non-rating Mentor)
13. Total Months
14. Total Months
15. (0 = Male, 1 = Female)
16. Total Years
17. (0 = Lieutenant, 1 = Captain)
18. (0 = White, 1 = Non-white)
19. (0 = Military, 1 = Civilian)
20. Scale Sum (as reported by Mentor)
21. As reported by Supervisor
22. As reported by Supervisor
23. As reported by Supervisor

H15: Mentoring Effectiveness, as reported by Mentors, will be negatively related to Mentor self-reports of Role Ambiguity.

Mentor Self-Reports of Mentoring Effectiveness and Mentor Rating Status. As the statistically significant correlation between Mentor self-reports of Mentoring Effectiveness and Mentor Rating Status is negative ($r = -.37^{**}$, $p < .01$, $N = 75$), this indicates Rating Mentors (coded “0”) were likely to report more effective mentoring relationships than Non-Rating Mentors. Due to the small population size, independent t-tests were computed to test for differences in means between Rating Mentor and Non-Rating Mentor reports of Mentoring Effectiveness (See Table 8).

Table 8

Mean Scores for Rating and Non-Rating Mentor Self-Reports of Mentoring Effectiveness

Factor: (Items 1 –21 are items from the Mentoring Effectiveness Scale)	Rating Mentors (N = 35)	Non-Rating Mentors (N = 40)	Observed t-value
<i>Regarding your mentoree, to what extent have you...</i>			
1. Encouraged him/her to try new ways of behaving on the job?	2.83	2.33	1.86*
2. Discussed his/her questions or concerns regarding feelings of competence, commitment to advancement, relationships with peers and supervisors or work/family conflicts?	3.09	3.00	.35
3. Served as a role model?	3.49	3.40	.53
4. Demonstrated good listening skills in your conversations?	3.86	3.79	.39
5. Conveyed feelings of respect for you as an individual?	4.23	3.93	1.86*
6. Encouraged him/her to talk openly about anxieties and fears that detract from his/her work?	3.31	2.93	1.41
7. Shared personal experiences as an alternative perspective to his/her problem?	3.77	3.53	1.14
8. Displayed attitudes and values similar to his/her own?	3.69	3.65	.21
9. Assigned responsibilities to him/her that increased his/her contact with people who will judge his/her potential for future advancement?	3.83	2.95	2.98**
10. Reduced unnecessary risks that could have increased his/her opportunities for promotion?	2.83	2.41	1.70
11. Helped him/her meet new colleagues?	2.97	2.75	.76
12. Given him/her projects that present opportunities to learn new skills?	3.57	2.78	2.74**
13. Helped him/her finish projects or tasks to meet deadlines that otherwise would have been difficult to complete?	2.46	2.30	.61
14. Encouraged him/her to prepare for advancement?	3.89	3.58	1.32
15. Given him/her projects that present opportunities to learn new skills?	3.80	2.95	3.18**
16. Given him/her projects that increased his/her contact with higher level managers?	3.77	2.75	3.82**
17. Protected him/her from working with other managers or work units before he/she knew about their likes/dislikes, opinions on controversial topics, and the nature of the political environment?	2.31	1.93	1.69*
18. Kept him/her informed about what is going on at higher levels in the organization or how external conditions are influencing the organization?	3.74	2.95	3.48**
19. Provided support and feedback regarding his/her performance as an officer?	4.03	3.03	4.56**
20. Given him/her projects that increased written and personal contact With senior officers?	3.69	2.33	5.17**
21. Interacted with him/her socially outside of work?	2.03	2.13	-.37
22. Mentoring Effectiveness Scale	3.39	2.91	3.35**

Note: The response format for all items is as follows: *not at all=1, to a slight extent=2, to some extent=3, to a large extent=4, to a very large extent=5.* * Indicates mean differences are significant at $p < 0.05$. ** Indicates mean differences are significant at $p < 0.01$.

Results of the independent sample t-tests resulted in statistically significant differences in means for the Mentoring Effectiveness Scale and 11 of the 21 scale items. Rating Mentors reported higher scores than Non-Rating Mentors on all statistically significant items. A pattern similar to CGOs with Supervisory and Non-Supervisory Mentors (Table 3) resulted as the majority items producing statistically significant results were from the “career-related mentoring functions” section of the Scale (items 9 through 21).

CGO Performance Ratings. As depicted in Table 7, Mentor self-reports of Mentoring Effectiveness produced statistically significant correlations with supervisor reports of CGO Interpersonal Effectiveness ($r = .26^*$, $p < .05$, $N = 63$), Job Dedication ($r = .26^*$, $p < .05$, $N = 63$), and Overall Performance ($r = .23^*$, $p < .05$, $N = 63$). Mentors who engaged in mentoring relationships with high performing CGOs reported higher levels of mentoring effectiveness. These findings are consistent with research by Olian, Carroll, and Giannantonio (1993) who found mentors perceived more benefits could be gained from higher performing protégés. These results also supported Hypothesis 11.

H11: Mentoring Effectiveness, as reported by Mentors, will be positively related to CGO Performance Ratings.

When analyzing Performance Ratings and Mentor's Rating Status correlations, statistically significant, negative relationships were found for Interpersonal Effectiveness ($r = -.21^*$, $p < .05$, $N = 63$) and Job Dedication ($r = -.30^{**}$, $p < .05$, $N = 63$) indicating supervisors of CGOs demonstrating interpersonal skills and job-related dedication also tended to be their mentors (Rating Mentor). To further investigate the proposition that CGO performance may be an indicator of whether or not the supervisor was also the

mentor, independent sample t-tests were computed on Performance Ratings of CGOs with Rating and Non-Rating Mentors. Statistically significant differences in means did result for Interpersonal Effectiveness and Job Dedication ratings of CGOs with Rating and Non-Rating Mentors (See Table 9).

Table 9

Mean Scores of Performance Ratings of CGOs with Rating and Non-Rating Mentors

Factor	Rating Mentor (N = 32)		Non-Rating Mentor (N = 31)		Observed t-value
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Interpersonal Effectiveness	5.98	.97	5.53	1.10	1.70*
Job Dedication	4.48	.68	3.96	.99	2.45**
Overall Performance	5.95	.92	5.71	1.07	.95

*Indicates mean differences are significant at the $p < .05$ level (1-tailed).

**Indicates mean differences are significant at the $p < .01$ level. (1-tailed)

CGOs with Rating Mentors received higher supervisory ratings in Interpersonal Effectiveness and Job Dedication than CGOs with Non-Rating Mentors, but Overall Performance Ratings did not result in a statistically significant difference in means for the CGOs. Based on these results, it would appear that high performing CGOs are more likely to have a supervisor who also fills the role of mentor.

Performance Ratings (Job Dedication, Interpersonal Effectiveness, and Overall Performance) also produced statistically significant correlations with the protégé characteristics Sense of Competence, LMX, and Proactive Personality (See Table 7). These results suggest CGOs who have Mentors are high performers and are more likely to demonstrate proactive, competent behaviors and attitudes in the workplace and have higher quality relationships with their mentors. These results are consistent with research

by Crant (1995) theorizing individuals with higher Proactive Personality scores would be considered high performers by their supervisors.

Length of Mentoring Relationship. Length of Mentoring Relationship resulted in statistically significant correlations with Mentor self-reports of Mentoring Effectiveness ($r = .24^*$, $p < .05$, $N = 75$) and Mentor Rating Status ($r = -.20^*$, $p < .05$, $N = 75$). Longer mentoring relationships appeared to influence the Mentor's perceptions of an effective mentoring relationship. Also, Rating Mentors reported longer mentoring relationships than Non-Rating Mentors. To determine the average length of time spent by Rating and Non-Rating Mentors, an independent sample t-test was used to test for differences in means in Mentor reports of Length of Mentoring Relationship. A statistically significant difference at the 0.05 significance level resulted. The average length of a mentoring relationship between CGOs and Non-Rating Mentors was 10.52 months ($N = 40$) and 13.97 months ($N = 35$) for Rating Mentors and CGOs.

Length of Mentoring Relationship also resulted in statistically significant correlations with CGO self-reports of Interpersonal Effectiveness ($r = .35^{**}$, $p < .01$, $N = 63$), Job Dedication ($r = .30^{**}$, $p < .01$, $N = 63$), and Overall Performance ($r = .36^*$, $p < .05$, $N = 63$, respectively). Mentors involved in longer mentoring relationships reported a higher level of mentoring effectiveness and tended to have longer mentoring relationships with high performing, more dedicated CGOs. These findings are consistent with results found by Cook (1987) and Kram (1985).

Mentor Self-Reports of Mentoring Effectiveness and Work-Related Contact Time. The correlation between Mentor self-reports of Work-Related Contact Time and Mentoring Effectiveness ($r = .33^{**}$, $p < .01$, $N = 75$, Table 7) indicated that the more

contact time spent with a CGO influenced the Mentor's perception of an effective mentoring relationship. No significant relationship existed between Mentor self-reports of Work-Related Contact Time and Mentor's Rating Status. A statistically significant relationship existed between Mentor self-reports of Work-Related Contact Time and CGO Rank ($r = -.25^*$, $p < .05$, $N = 64$) indicating mentors spent more time with lieutenants (coded "0") than captains (coded "1"). Results supported Hypothesis 10.

H10: Mentoring Effectiveness, as reported by Mentors, will be positively related to Work-Related Contact Time with CGOs.

Mentor reports of Work-Related Contact Time also resulted in significant correlations with Mentor self-reports of Role Ambiguity ($r = .24^*$, $p < .05$, $N = 75$) and Perceptions of Risk ($r = -.19^*$, $p < .05$, $N = 75$). Mentors who had a clear understanding of their own job responsibilities and duties spent more time with their protégés. Likewise, mentors who did not feel threatened or put at risk by the mentoring relationship spent more time with protégés. Not only did mentors report spending more time with lieutenants, they also reported higher levels of understanding their job responsibilities and duties (low Role Ambiguity) when mentoring lieutenants ($r = -.26^*$, $p < .05$, $N = 64$) and also considered mentoring lieutenants to be less risky than mentoring captains ($r = .27^*$, $p < .05$, $N = 64$).

Supervisor and Mentor Self-Reports of Work-Related Contact Time and CGO Self-Reports of LMX, Sense of Competence, and Proactive Personality. The next analysis involved an examination of correlational relationships between CGO self-reports of LMX, Sense of Competence, and Proactive Personality with Mentor reports of Work-Related Contact Time. Only one statistically significant relationship between Mentor

self-reports of Work-Related Contact Time and Proactive Personality ($r = .24^{**}$, $p < .01$, $N = 61$) resulted. These findings are similar to CGO self-reports of Work-Related Contact Time and CGO self-reports of Sense of Competence, LMX, and Proactive Personality. Only CGO self-reports of Proactive Personality and CGO self-reports of Work-Related Contact Time resulted in a statistically significant correlation ($r = .17^*$, $p < .05$, $N = 108$). A CGO's willingness to show initiative, take action, and engage in problem-solving activities results in more work-related contact time spent with a mentor.

Barriers to Mentoring

Mentoring literature has suggested that Barriers to Mentoring may be influenced by race, rank, gender, education, performance ratings, rank, LMX, perceptions of risks, role ambiguity, and mentoring experience (Allen, Poteet, Russell, & Dobbins, 1997; Ragins & Cotton, 1991; Turban & Dougherty, 1994). Research by Turban and Dougherty (1994) suggested protégé characteristics such as locus of control and self-monitoring may impact the amount of mentoring received and the supervisor's perceptions of the subordinate's job performance. Job performance, in turn, has been linked to the quality of the communication exchange (LMX) superiors shared with subordinates (Wayne, Shore, and Liden, 1997). This study considered these factors as well as Work-Related Contact Time, Exposure to Mentoring Training, and CGO self-reports of Proactive Personality and Sense of Competence. Results will be presented from the perspectives of the Mentor and CGOs with and without Mentors.

The CGO Perspective. Correlations between Barriers to Mentoring and factors thought to influence them are reported in Table 10. Factors theorized to influence Barriers to Mentoring such as CGO rank, organizational tenure (Ragins & Cotton, 1991),

Table 10

Factors Influencing Barriers to Mentoring from the CGO Perspective

Factor	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Barriers to Mentoring	172	2.64	0.95	1	.95**	.90**	—	—	—	—	-.22*	-.19**	—	-.24**	—	—	
2. Barriers to Obtaining Mentoring	174	2.66	1.01	1	.71**	.16*	—	—	—	—	-.21**	.19*	-.14*	.27**	—	—	
3. Barriers to Initiating Mentoring	177	2.65	1.04	1	—	—	—	—	—	—	-.15*	—	-.15*	.17**	—	—	
4. Mentor Status	224	0.5	0.5	1	—	—	—	—	—	—	—	—	—	—	—	—	
5. CGO Sex	214	0.15	0.36	1	—	—	—	—	—	—	—	-.16*	-.18**	-.15**	—	—	
6. CGO Race	213	0.17	0.38	1	—	—	—	—	—	—	—	—	—	—	—	—	
7. CGO Rank	215	0.47	0.5	1	—	—	—	—	—	—	—	.14*	—	—	—	—	
8. CGO Proactive Personality	192	5.32	0.84	1	—	—	—	—	—	—	.15*	—	—	—	—	—	
9. CGO Sense of Competence	188	4.72	0.8	1	—	—	—	—	—	—	.15*	—	—	—	—	—	
10. CGO LMX	191	5.28	1	1	—	—	—	—	—	—	.15*	—	—	—	—	—	
11. Exposure to Mentoring	205	2.61	1.11	1	—	—	—	—	—	—	.27**	.27**	.34**	—	—	—	
12. Interpersonal Effectiveness	338	5.61	1.21	1	—	—	—	—	—	—	—	—	—	—	—	—	
13. Job Dedication	338	4.13	0.94	1	—	—	—	—	—	—	.15*	.24**	.15*	.23**	.23**	—	
14. Overall Performance	338	5.57	1.26	1	—	—	—	—	—	—	.15*	.24**	.14*	.14*	.15*	—	

*Correlation is significant at the 0.01 level (1-tailed)
**Correlation is significant at the 0.05 level (1-tailed)

4. (0 = CGO has Mentor, 1 = CGO does not have Mentor)

5. (0 = Male, 1 = Female)

6. (0 = White, 1 = Non-white)

7. (0 = Lieutenants, 1 = Captains)

8. (as reported by CGOs)

9. (as reported by CGOs)

10. (as reported by CGOs)

11. (Average of responses on Knowledge of AFPD 26-34, Mentoring Training, Mentoring Publications, and Knowledge of Mentoring Groups items)

12. (as reported by supervisors)

13. (as reported by supervisors)

14. (as reported by supervisors)

protégé sex (Ragins & Cotton, 1991), and race (Thomas, 1990) failed to produce statistically significant correlations. Three statistically significant correlations did result between CGO self-reports of Barriers to Mentoring and CGO self-reports of Proactive Personality, Sense of Competence, and Exposure to Mentoring. Results failed to support Hypothesis 1.

H1: Barriers to Mentoring, as reported by CGOs, will be negatively related to CGO rank, organizational tenure, race, and gender.

CGO Self-Reports of Barriers to Mentoring and Protégé Characteristics.

Correlations between CGO self-reports of Barriers to Mentoring and CGO self-reports of Proactive Personality ($r = -.22^{**}$, $p < .01$, $N = 171$) and Sense of Competence ($r = -.19^{**}$, $p < .01$, $N = 169$) suggest CGOs with higher Proactive Personality and Sense of Competence scores were less likely to perceive Barriers to Mentoring than CGOs with lower scores. Research by Allen, Poteet, Russell, & Dobbins (1997) found that individuals reporting a high quality communication exchange with their supervisors would be less likely to perceive barriers to mentoring; however, results from this study failed to support previous findings as CGO self-reports of LMX did not produce a statistically significant correlation with CGO self-reports of Barriers to Mentoring.

Results partially supported Hypothesis 2.

H2: Barriers to Mentoring, as reported by CGOs, will be negatively related to CGO self-reports of Sense of Competence, Leader/Member Exchange, and Proactive Personality.

CGO Self-Reports of Barriers to Mentoring and Exposure to Mentoring. CGO self-reports of Exposure to Mentoring was negatively correlated with Barriers to Mentoring

Scale ($r = -.24^{**}$, $p < .01$, $N = 205$) and both sub-scales (Barriers to Initiating Mentoring, $r = -.17^*$, $p < .05$, $N = 177$, and Barriers to Obtaining Mentoring, ($r = -.27^*$, $p < .05$, $N = 174$) indicating more exposure to mentoring reduced perceived barriers to gaining a mentor. Furthermore, CGOs with Mentors also reported having more exposure to mentoring training ($r = -.18^{**}$, $p < .01$, $N = 205$) than CGOs without Mentors. These results suggest exposure to mentoring training, publications, and mentoring-related groups do have the anticipated result on potential protégés as CGOs with some exposure are engaged in mentoring relationships. A statistically significant difference in means resulted between CGOs with Mentors and CGOs without Mentors and the average reported Exposure to Mentoring score at $p < .01$. CGOs with Mentors averaged .39 ($N = 111$) and CGOs without Mentors averaged .29 ($N = 94$). Because the averages of Exposure to Mentoring were low, CGO responses were calculated for each scale item and reported in Table 11 to provide more insight into the amount of exposure to mentoring information.

Table 11

Frequencies of Exposure to Mentoring Training (as reported by All CGOs)

Factor	All CGOs ($N = 205$)		CGOs with Mentors ($N = 111$)		CGOs without Mentors ($N = 94$)	
	Yes	No	Yes	No	Yes	No
AFPD 36-34	52.7%	47.3%	57.7%	42.3%	46.8%	53.2%
Mentoring Publications	23.4%	76.6%	28.8%	71.2%	17.0%	83.0%
Mentoring Training	8.8%	91.2%	13.5%	86.5%	3.2%	96.8%
Mentoring Groups	53.7%	46.3%	56.8%	43.2%	50.0%	50.0%

CGOs with Mentors indicated having more exposure to the four mentoring-related items than CGOs without Mentors. Aside from statistically significant difference in means between CGOs with and without Mentors, a majority of respondents from both groups indicated no exposure to the mentoring-related items. CGOs were not asked if the exposure to mentoring occurred before the mentoring relationship or as a result of the mentoring relationship. Results supported Hypothesis 3.

H3: Barriers to Mentoring, as reported by CGOs, will be negatively related to CGO self-reports of Exposure to Mentoring.

CGO Self-Reports of Barriers to Mentoring and CGO Mentor Status. Surprisingly, no statistically significant relationships existed between CGOs with and without Mentors and Barriers to Mentoring. Results could be interpreted to mean that the CGOs without Mentors were not interested in a mentoring relationship or did not understand the potential benefits of mentoring. When responding to the survey item, "I have no need for a mentoring relationship", 83% of respondents indicated they did have a need for a mentoring relationship. To test if differences in responses to this question existed between CGOs with and without Mentors, an independent sample t-test was used (item was reverse scored). Results indicated CGOs without Mentors were less likely to report needing a mentoring relationship than CGOs with Mentors (Mean = 5.08, N = 84, Mean = 5.98, N = 109, respectively). Results were significant at the $p < 0.01$ level. When evaluating difference in mean responses between lieutenants and captains, no statistically significant difference in means resulted for this item.

The Mentor Perspective. Correlations of factors thought to influence Barriers to Mentoring as perceived by Mentors are reported in Table 12. Results failed to support

Table 12

Factors Influencing Barriers to Mentoring from the Mentor Perspective

Factor	N	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Barriers to Mentoring	75	2.62	1.13	1	.91**	.94**	—	—	—	—	—	—	—	—	—	—	—	—	.44**	.40**	—	
2. Barriers to Initiating (Sub-scale)	75	2.22	1.26	1	.72**	.20*	—	—	—	—	—	—	—	—	—	—	—	—	.37**	.35**	—	
3. Barriers to Obtaining (Sub-scale)	75	2.3	1.19	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.45**	.40**	—	
4. Contact Time	75	5.3	5.88	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.24*	—	—	
5. Exposure to Mentoring	74	2.61	1.11	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.22*	—	—	
6. Similarity Index	75	4.15	2.14	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.35**	—	.27*	—
7. Role Ambiguity	75	5.57	0.99	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.25*	—	.40**	—
8. Perceptions of Risk	75	1.66	0.8	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.26*	—	.39**	.31**
9. Interpersonal Effectiveness	338	5.61	1.21	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.37**	.42**	.26**	—
10. Job Dedication	338	4.13	0.94	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.35**	—	.33**	—
11. Overall Performance	338	5.57	1.26	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.30**	—	.25*	—
12. Sex of CGO	75	0.15	0.36	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.36**	—	.37*	—
13. Length of Mentoring Relationship	75	12.1	8.48	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14. Civilian or Military Mentor	72	4.87	1.32	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15. CGO Rank	215	0.47	0.5	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.24*	—	—	—
16. CGO Race	213	0.17	0.38	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.30**	—	.25*	—
17. Assigned Mentor	71	2.22	1.55	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.36**	—	.37*	—
18. Voluntary Mentor	73	5.88	1.13	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19. Difference in Rank	61	2.67	1.31	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.35**	—	.33**	—

**Correlation is significant at the 0.01 level (1-tailed)

*Correlation is significant at the 0.05 level (1-tailed)

1. Scale average as reported by Mentors
2. Sub-scale average as reported by Mentors
3. Sub-scale average as reported by Mentors
4. Average Work-related Contact Time as reported by Mentors
5. Sum of Exposure to Mentoring Items as reported by Mentors
6. Similarity Index Score as reported by Mentors
7. Role Ambiguity Scale average as reported by Mentors
8. Perception of Risk Scale as reported by Mentors
9. Supervisor reports of CGO Interpersonal Effectiveness
10. Supervisor reports of CGO Job Dedication
11. Supervisor reports of CGO Overall Performance
12. CGO's sex
13. Length of mentoring relationship as reported by Mentor
14. Military = 0, Civilian = 1
15. Lieutenant = 0, Captain = 1
16. 0 = White, 1 = Non-white
17. Assigned mentoring as reported by Mentors
18. Voluntary mentoring as reported by Mentors
19. Difference in Rank = Mentor Rank - CGO Rank

work by Ragins and Cotton (1991) that found mentor's age, rank, length of employment, exposure to mentoring, and sex would influence perceived Barriers to Mentoring. Four factors did produce statistically significant results to Barriers to Mentoring, as reported by Mentors. These factors included Mentor self-reports of Role Ambiguity ($r = -.36^{**}$, $p < .01$, $N = 75$), Mentor self-reports of Perceptions of Risk ($r = -.40^{**}$, $p < .01$, $N = 73$), Voluntary Mentoring ($r = -.40^{**}$, $p < .01$, $N = 73$), and Assigned Mentoring ($r = .44^{**}$, $p < .01$, $N = 71$).

Role Ambiguity and Perceptions of Risk as Reported by Mentors. Results indicated Mentors who perceived fewer risks involved in mentoring a particular protégé also reported fewer Barriers to Mentoring ($r = -.40^{**}$, $p < .01$, $N = 73$). These findings partially support work by Olian, Carroll, and Giannantonio (1993). A primary difference is that CGO Performance Ratings did not produce statistically significant correlations with Mentor self-reports of Barriers to Mentoring or Perceptions of Risk. Mentors who experienced less Role Ambiguity also reported fewer Barriers to Mentoring ($r = -.36^{**}$, $p < .01$, $N = 75$). Results fully support Hypothesis 4 and 5.

H4: Barriers to Mentoring, as reported by Mentors, will be negatively related to Mentor self-reports of Perceptions of Risk.

H5: Barriers to Mentoring, as reported by Mentors, will be negatively related to Mentor self-reports of Role Ambiguity.

Mentoring literature suggests reasons for risk associated with mentoring are an unwillingness to mentor females, disapproval from other organizational members, and possible misinterpretations of sexual advances (Ragins & Cotton, 1991). Results from this study failed to support these findings. Mentors did not report believing these factors

put them at risk. They also believed their supervisors were supporting of their involvement with mentoring. Independent sample t-tests were used to test for differences in mean scores between Rating and Non-Rating Mentors on the Perceptions of Risk Scale and the six individual scale items from the Perceptions of Risk Scale. Only one item, "Has mentoring this person put you at risk because your mentoree might falsely report improper behavior", produced a statistically significant difference in means. Rating Mentors, reporting an average score of 1.65 (N = 34), seemed more concerned about this particular risk item than Non-Rating Mentors (Mean = 1.35, N = 40). (Perception of Risk scale is anchored by (1) "Strongly Disagree" and (7) "Strongly Agree").

Assigned and Voluntary Mentoring Relationships

This analysis also considered the mentor's motive for deciding to be a mentor as well as the reason for selecting a particular protégé. If a mentor indicated that he or she was directed to be a mentor and also directed to mentor a specific person, this was considered "Assigned" mentoring. Mentors that became mentors and selected a particular protégé because they wanted to do it were considered to be in "Voluntary" mentoring relationships. Voluntary and Assigned Mentor Status were correlated with Perceptions of Risk, Role Ambiguity, Similarity Index, and Mentoring Effectiveness. Results failed to support the relationship with Similarity Index (Hypothesis 23).

H23: Voluntary mentoring will be positively related to Mentor self-reports of shared characteristics with CGOs.

Perceptions of Risk and Role Ambiguity. Results indicated that mentors engaged in voluntary mentoring reported lower Perceptions of Risk ($r = -.42^{**}$, $p < .01$, $N = 73$) than when the mentoring relationship was assigned ($r = .37^{**}$, $p < .01$, $N = 73$) and less Role

Ambiguity with voluntary mentoring ($r = .39^{**}$, $p < .01$, $N = 73$). Mentors involved in voluntary mentoring relationships believed the mentoring relationships were effective ($r = .25^*$, $p < .05$, $N = 73$, Table 8), however, no statistically significant relationship resulted between assigned mentoring and mentor self-reports of Mentoring Effectiveness. These results fully supported Hypotheses 17, 19 and 20, partially supported Hypothesis 16, and failed to support Hypothesis 18.

H17: Assigned mentoring will be positively related to Mentor self-reports of Perceptions of Risk.

H19: Voluntary mentoring will be negatively related to Mentor self-reports of Perceptions of Risk.

H20: Voluntary mentoring will be negatively related to Mentor self-reports of Role Ambiguity.

H16: Assigned and Voluntary mentoring will be positively related to Mentoring Effectiveness. (Only supported for Voluntary mentoring)

H18: Assigned mentoring will be positively related to Mentor self-reports of Role Ambiguity. (Failed to support)

Work-Related Contact Time. Voluntary mentor status, when correlated with Mentor self-reports of Work-Related Contact Time with the CGO, did not result in a statistically significant correlation, but Assigned mentor status did result in a statistically significant correlation ($r = .22^*$, $p \leq .05$, $N = 71$, Table 8) indicating the more an individual believed the mentoring was assigned, the less work-related contact time spent with the CGO. (Responses for the Assigned mentoring were reverse scored. The items were originally

anchored with (1) "Strongly Disagree" and (7) "Strongly Agree"). Results partially supported Hypothesis 22.

H22: Voluntary and Assigned mentoring will be positively related to Mentor self-reports of Work-Related Contact Time with CGOs.

Civilian and Military Mentors. Assigned mentors reported a statistically significant correlation with Civilian or Military Status ($r = .24^*$, $p < .05$, $N = 68$, Table 14) indicating civilian mentors were more likely to be assigned mentors than military mentors. Both Assigned and Voluntary mentors reported a statistically significant relationship with exposure to mentor-related training, publications, and knowledge of mentoring groups ($r = -.25^*$, $p < .05$, $N = 70$; $r = .27^*$, $p < .05$, $N = 72$, respectively) fully supporting Hypothesis 21.

H21: Voluntary and Assigned mentoring will be positively related to Mentor self-reports of Exposure to Mentoring.

H23: Voluntary mentoring will be positively related to Mentor self-reports of shared characteristics with CGOs.

V. Conclusions

Overview

This research effort resulted in successfully identifying possible contributors to perceptions of Mentoring Effectiveness and Barriers to Mentoring from the perspective of CGOs, Supervisory Mentors, and Non-Supervisory Mentors. Advantages and disadvantages between assigned and voluntary mentoring were also found.

The CGO Perspective. CGOs with Mentors reported effective mentoring relationships with Supervisory and Non-Supervisory Mentors, though a mentoring relationship with a Supervisory Mentor resulted in more work-related contact time spent between CGO and mentor. Specifically, lieutenants received more time from mentors than captains did. CGOs also believed the career-related aspects of mentoring contributed more to perceptions of mentoring effectiveness than the psychosocial support functions. Statistical tests did not support differences between military and civilian mentors and the CGOs' perceptions of effective mentoring. Open-ended comments provided by CGOs focused more on gaining access to senior leaders and supervisors as opposed to whether or not the supervisor or mentor was a military member. CGOs seemed to believe work-related contact time focused on career-related mentoring with the mentor was the primary contributor to an effective mentoring relationship.

CGOs who demonstrated a higher level of work-related competence, proactive personality, and the ability to engage in high quality communication exchanges were not only more likely to have mentors, but they perceived fewer barriers to gaining mentors. They also were more likely to have mentors outside their chains-of-command. When

CGOs had mentors other than their supervisors, they tended to choose individuals with whom they shared common characteristics such as AFSC, anticipation of similar career paths, friendship, and gender.

CGOs with Mentors also had more exposure to mentoring-related information and training than CGOs without Mentors. Not only was the exposure to mentoring training a positive influence on their perceptions of effective mentoring relationships, it also resulted in CGOs with Mentors perceiving fewer barriers to gaining access to mentors.

The Mentor Perspective. Individuals who were comfortable with their job-related duties and clear about duty expectations were more likely to become mentors. These mentors were attracted to high-performing CGOs who demonstrated work-related competence, initiative, and a willingness to learn. Mentors believed mentoring relationships with lieutenants were less risky than mentoring captains, and as a result, reported spending more work-related contact time with lieutenants. Like CGOs, mentors believed the career-related functions of mentoring contributed more to the effectiveness of a mentoring relationship than the psychosocial support functions. Mentors also believed longer mentoring relationships resulted in more effective mentoring and they tended to have longer mentoring relationships with higher performing CGOs.

Assigned and Voluntary Mentoring. Mentors engaged in voluntary and assigned mentoring believed the relationships could be effective, however, assigned mentors believed mentoring was more risky than voluntary mentors. Assigned mentors, who tended to be civilians rather than military members, also reported spending less time with CGOs than voluntary mentors. Exposure to mentoring-related information and training positively influenced both assigned and voluntary mentors.

Discussion

Overall, the concept of mentoring with the USAF seems to be well received by CGOs and their civilian and military supervisors and mentors. There is encouraging news for all military members, specifically females, as race and gender were not found to be factors influencing mentoring effectiveness or barriers to mentoring. Results also reinforced career advice given to all young officers, regardless of commissioning source. We are told to spend the time as a lieutenant learning the career field and concentrating on becoming technically proficient in an AFSC. This advice appears sound as research results indicate that CGOs who demonstrate a willingness to work and are competent will be noticed by mentors inside and outside the organization. Supervisors and mentors will be willing to spend the time providing guidance and direction to CGOs who are solid performers as they want a positive return on their investments of time and energy. Furthermore, protégés and mentors who have successful mentoring experiences are more likely to mentor other junior officers, so the development and nurturing of a “mentoring-oriented” culture continues.

CGOs experienced effective mentoring relationship with individuals they had selected as a mentor outside their chains-of-command and with organizationally-designated Supervisory Mentors. CGOs attributed time spent on career-related mentoring with Supervisory Mentors to the effectiveness of the mentoring relationship. By encouraging CGOs to take advantage of the benefits offered by Supervisory Mentors, lieutenants can receive more time and attention learning from the individuals responsible for their training as well as appraising their performance. Supervisors, both military and civilian, have indicated a willingness to spend the time with CGOs, especially

lieutenants, to build an effective mentoring relationship. The results also indicate experienced, more senior CGOs tend to seek mentors outside of an organizationally designated mentor. The USAF's policy of assigning supervisors to be the mentors of young officers seems to be working, especially for lieutenants. There is, however, work to be done as USAF members' exposure to mentoring training and publications does not appear to be as widely disseminated as anticipated. Reductions in perceptions to barriers to mentoring by CGOs and mentors and increased perceptions of mentoring effectiveness may be attributed to mentoring training and association with mentoring-related groups, however, responses indicated more education and training are required.

Three findings from this study lead to a proposition for future consideration regarding the Air Force Mentoring Program. First, mentors outside of a CGO's chain-of-command appear to be more willing to assume mentoring responsibilities when the protégés are high-performing officers. Second, captains are more likely to seek mentors from outside their chains-of-command than lieutenants. Finally, lieutenants report spending more work-related contact time with Supervisory Mentors, and the lieutenants consider the career-related mentoring functions to be an important aspect of determining an effective mentoring relationship. Survey comments from CGOs such as, "My supervisors are all civilians. They are great for job mentoring, but not for Air Force career mentoring," and "Mentoring is much more than guiding a person down a career field, it's showing knowledge and experiences in life as well as the job" also suggest young officers may not clearly understand the distinction between supervisor and mentor. As the supervisor and mentor may be performing the same career-related functions, especially from the perspective of lieutenants, perhaps the Air Force needs to evaluate the

value added in mandating supervisors as mentors for captains. Furthermore, if we continue using this assigned mentoring approach, research suggests extensive training of mentors and protégés is required. Based on the preliminary questions asked in the surveys, exposure to mentoring-related information is not as wide-spread as hoped. Perhaps we need to ask questions such as: Is mentoring an entitlement for all junior officers, regardless of performance, or is the goal for mentoring to be treated in a manner similar to professional military education where 100% participation is the goal? Does mandatory participation by supervisors and subordinates in the Air Force Mentoring Program detract from the purpose of “developing well-rounded, professional, competent, young officers” (AFI 26-3401, p. 1)? By mandating mentoring for all CGOs, is an administrative burden created that weakens the integrity of the program or is this a necessary tradeoff to ensure mentoring opportunities for officers who may fall through the cracks of the system?

Implications for Future Research

Based on the receptiveness of ASC respondents to participate in this study, this researcher believes a follow-on research effort is feasible. Future research could use the same or slightly modified survey instruments as used in this study. A concentrated effort to solicit inputs from female respondents, from both junior and senior officer ranks, needs to be made to increase the applicability of results to the USAF population. Though previous research has examined advantages and risks associated with terminating mentoring relationships, these questions have not been asked in a military environment. As access to the higher ranks of the military can only be gained through time-in-service, risks associated with mentoring termination may have different risks than terminating

mentoring relationships in a private or corporate environment where individuals may be more mobile or can more easily change careers. In conjunction with research involving terminations of mentoring relationships, inputs from mentors and protégés that have survived unsuccessful mentoring relationships may provide useful information regarding possible characteristics of mentors and/or protégés to avoid. Mentoring effectiveness and contact time received by CGOs who were low or average performers could also be investigated.

The implementation of the Air Force Mentoring Program is fairly new, so a follow-up analysis on the program's effect could be warranted. Information regarding awareness and satisfaction would provide a starting point, but information solicited from newly promoted officers regarding the contributions made by mentoring (i.e., preparation, counseling, or career guidance) could prove valuable as an incentive for junior and senior officers to pursue mentoring relationships. The more success stories attributed to successful mentoring, the more likely the Air Force Mentoring Program will be successful. Finally, research involving mentoring effectiveness does not need to be relegated only to the officer corps. Studies of enlisted and civilian mentoring relationships, and comparisons among officer, enlisted, and civilian mentoring, may prove beneficial in developing an optimal program.

Limitations

The researcher acknowledges three limitations regarding this research effort. The first limitation involves the survey population. Approximately half of the CGO respondents were lieutenants serving their first tours of duty, so their perceptions of what constitutes an "effective mentoring relationship" may be based on only one experience.

A second limitation involves the disproportionate number of returned questionnaires for participant groups. Though the total collected data approximates the proportion of males and females in the USAF, an increased number of female responses, from CGOs, supervisors, and mentors, would have increased the scope of analysis. The disproportionate percentage of female respondents made statistically significant comparisons based on gender somewhat difficult. Sufficient numbers of surveys were returned for supervisors and CGOs, but an increase in the mentor survey return-rate would have been useful. A third limitation involves the distribution method of supervisor surveys. As the surveys were mailed to "The Supervisor of (CGO name)", some supervisors received multiple surveys to complete on their subordinates. By receiving multiple responses from the same supervisor, the possibility exists that some bias was introduced.

Conclusion

The study's contribution to the existing body of mentoring literature primarily lies in its analysis of information derived from comparing attitudes and behaviors relating to mentor-protégé and supervisor-subordinate pairs involved in mentoring relationships. This study serves as the first research documenting effects of behavioral characteristics, mentor and protégé contact time, factors influencing barriers to mentoring, and perceptions of mentoring effectiveness by using inputs from both parties in the mentoring relationship. Results from this research are encouraging for the USAF officer corps as the data indicates that an officer, regardless of race or gender, can have an effective mentoring relationship with a personally selected or organizationally assigned mentor.

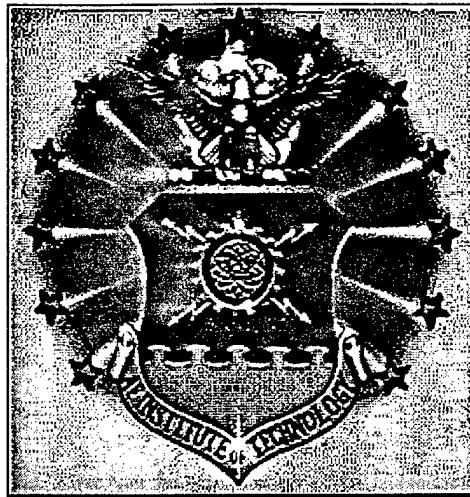
Appendix A: Demographic Data

Factor	CGOs (N = 224)	Supervisors (N = 338)	Mentors (N = 75)
Mentor?			
Yes	49.6% (n = 111)	Not Applicable	Not Applicable
No	50.4% (n = 113)		
Sex			
Male	85% (n = 182)	88.4% (n = 298)	88% (n = 66)
Female	15% (n = 32)	11.6% (n = 39)	12% (n = 9)
Race			
White	83.1% (n = 177)	94.0% (n = 316)	86.7% (n = 65)
Non-white	16.9% (n = 36)	6.0% (n = 20)	13.3% (n = 10)
Age	<u>M</u> = 29.25, <u>SD</u> = 4.73, (n = 214)	<u>M</u> = 45.32, <u>SD</u> = 8.01, (n = 335)	<u>M</u> = 42.40, <u>SD</u> = 10.19, (n = 75)
Time assigned to unit (Months)	<u>M</u> = 15.88, <u>SD</u> = 11.42, (n = 211)	<u>M</u> = 8.23, <u>SD</u> = 22.33, (n = 333)	<u>M</u> = 32.29, <u>SD</u> = 42.38, (n = 75)
Years in AFSC	<u>M</u> = 3.63, <u>SD</u> 2.79, (n = 211)	<u>M</u> = 11.69, <u>SD</u> 35.14, (n = 334)	<u>M</u> = 9.07, <u>SD</u> = 7.58, (n = 71)
Source of Commission			
OTS	21.4% (n = 46)	15.3% (n = 50)	18.7% (n = 14)
ROTC	53.5% (n = 115)	30.6% (n = 100)	34.7% (n = 26)
USAFA	22.8% (n = 49)	7.0% (n = 23)	16.0% (n = 12)
OTHER	2.3% (n = 5)	1.2% (n = 4)	1.3% (n = 1)
Not Applicable	0	45.9% (n = 150)	29.3% (n = 22)
Highest Academic Degree			
High School	0	2.7% (n = 9)	2.7% (n = 2)
Some College	0	.3% (n = 1)	0
2-yr Degree	0	.6% (n = 2)	0
Bachelor's	25.1% (n = 54)	16.0% (n = 54)	14.7% (n = 11)
Bachelor's +	31.6% (n = 68)	0	0
Master's	40.9% (n = 88)	74.6% (n = 252)	72.0% (n = 54)
Ph.D.	1.4% (n = 3)	5.3% (n = 18)	10.7% (n = 8)
Other	.5% (n = 2)	.6% (n = 2)	0
Marital Status			
Married	66.5% (n = 143)	86.3% (n = 289)	84.0% (n = 63)
Divorced	4.2% (n = 9)	5.7% (n = 19)	4.0% (n = 3)
Single	28.4% (n = 61)	6.0% (n = 20)	12.0% (n = 9)
Widow/Widower	.9% (n = 2)	2.1% (n = 7)	
Highest Level of PME			
SOS	38.6% (n = 83)	11.3% (n = 37)	12.0% (n = 9)
ISS	0	23.6% (n = 77)	22.7% (n = 17)
SSS	0	27.3% (n = 89)	33.3% (n = 25)
None	61.4% (n = 132)	37.7% (n = 123)	32.0% (n = 24)
Not Applicable	0	0	0

Appendix A: Demographic Data (continued)

Factor	CGOs (N = 224)	Supervisors (N = 338)	Mentors (N = 75)
Similarity Index (1-13)			
Career Field	33.0% (n = 74)	63.9% (n = 216)	66.7% (n = 50)
Gender	38.8% (n = 87)	74.9% (n = 253)	78.7% (n = 59)
Age	4.9% (n = 11)	9.5% (n = 32)	12.0% (n = 9)
Marital Status	29.9% (n = 67)	54.4% (n = 184)	56.0% (n = 42)
Religion	11.6% (n = 26)	12.4% (n = 42)	14.7% (n = 11)
Ethnic Background	17.0% (n = 38)	26.6% (n = 90)	33.3% (n = 25)
Education Level	16.1% (n = 36)	24.9% (n = 84)	25.3% (n = 19)
Commission Source	11.6% (n = 26)	16.9% (n = 57)	26.7% (n = 20)
Career Path	12.9% (n = 29)	15.1% (n = 51)	26.7% (n = 20)
Previous Career-related Experience	10.3% (n = 23)	9.8% (n = 33)	16.0% (n = 12)
Friendship	27.2% (n = 61)	20.4% (n = 69)	36.0% (n = 27)
Similar Off-duty Interests	14.7% (n = 33)	10.7% (n = 36)	17.3% (n = 13)
Association with Other Family Members	4.5% (n = 10)	2.4% (n = 8)	5.3% (n = 4)
Exposure to Mentoring			
AFPD 36-34			
Yes	56.7%	43.5%	52.0%
No	47.3%	56.5%	48.0%
Publications			
Yes	23.4%	52.4%	35.1%
No	76.6%	47.6%	64.9%
Training			
Yes	8.8%	84.6%	13.3%
No	91.2%	15.4%	86.7%
Groups			
Yes	53.7%	63.5%	40%
No	46.3%	36.5%	60%

Appendix B: The Supervisor Survey



**A SURVEY TO ASSESS EFFECTIVE MENTORING
CHARACTERISTICS AND PRACTICES**

FOR THE SUPERVISOR OF:

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY (AETC)
AIR FORCE INSTITUTE OF TECHNOLOGY**

INFORMATION ABOUT THIS RESEARCH STUDY

Thank you for agreeing to participate in this research study. Your experiences will make an important contribution.

Description of the study: The purpose of this study is to assess the impact of career-related mentoring. Surveys will be administered to company grade officers, supervisors, and/or mentors of these officers.

Confidentiality of your responses: This information is being collected for research purposes only. No one in your unit, base, or MAJCOM will ever see your individual responses. No statistics on units below the level of Aeronautical System Center will be revealed.

PRIVACY ACT STATEMENT

In accordance with AFI 37-132, paragraph 8, the following information is provided as required by the Privacy Act of 1974.

Authority: 10 U.S.C. 8013, Secretary of the Air Force; powers and duties; delegation by; implemented by AFI 36-2601, Air Force Personnel Survey Program.

Purpose: This survey is being conducted to collect demographic, affective, perceptual, and behavioral data regarding career-related mentoring relationships. This data will be analyzed to determine the effectiveness of career-related mentoring and potentially lead to improvements in mentoring practices.

Routine Use: Future programs designed to enhance mentoring training can draw upon techniques and effectiveness perceived to result from career-related mentoring of company grade officers. Individual responses will never be reported and ONLY members of the research team will be permitted to access the raw data. Reports summarizing mentoring effectiveness for the entire sample may be published. *No individual will be identified to anyone outside of the research team.*

Participation: Participation is voluntary. No adverse action will be taken against any member who does not participate in this survey or who does not complete any part of this survey.

CONTACT INFORMATION

If you have any questions, please feel free to contact me or my thesis advisor, Lt Col Van Scotter.

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DSN: 785-7777 (ext. 3344 - voice mail)

INSTRUCTIONS

1. Please answer directly on the questionnaire.
2. Please use a "soft-lead" (No. 2) pencil and observe instructions for each section as appropriate.
3. To ensure your privacy, please complete the questionnaire, seal it in the envelope which is provided, and return it through the base mail system to: AFIT/LAA Survey Collection Point, Wright-Patterson AFB, OH.

Questions in this section refer to the officer whose name appears on the front of this survey. Note: You do not have to be the official rater to be considered the supervisor for this survey.

1. Are you the official rater of this person (i.e., Do you write his or her OPR)? (Fill in one circle)

Yes
 No

2. What is the rank of your subordinate (this officer)? (Fill in the blank)

Enter Rank: _____

3. How long have you known this officer? (Fill in the blank)

Total Months: _____

4. How long have you supervised this officer? (Fill in the blank)

Total Months: _____

5. How long had you been assigned to your work unit before you began supervising this officer?

(Fill in the blank)

Total Months: _____

6. Is this officer: (Fill in one circle)

Male
 Female

7. Is this officer: (Fill in one circle)

American Indian or Alaskan Native
 Black, not of Hispanic Origin
 White, not of Hispanic Origin
 Asian American or Pacific Islander
 Hispanic
 Other (specify): _____

8. This officer's age: (Fill in the blank)

Years: _____

Questions in this section refer to you.

9. Are you: (Fill in one circle)

- Male
- Female

10. How long have you been assigned to your current work unit? (Fill in the blank)

Years: _____

11. Are you: (Fill in one circle)

<input type="radio"/> American Indian or Alaskan Native	<input type="radio"/> Asian American or Pacific Islander
<input type="radio"/> Black, not of Hispanic Origin	<input type="radio"/> Hispanic
<input type="radio"/> White, not of Hispanic Origin	<input type="radio"/> Other (specify): _____

12. Your age: (Fill in the blank)

Years: _____

13. Your rank (if military) or civilian equivalent (WG, GS, SES, etc.): (Fill in the blank)

Rank/Equivalent: _____

14. Indicate your primary duty AFSC or Position Title: (Fill in the blank)

AFSC/Position Title: _____

15. Years in current AFSC or Position Description: (Fill in the blank)

Years: _____

16. Your source of commission: (Fill in one circle)

- OTS
- ROTC
- USAFA
- Direct Commission
- N/A

17. Your highest academic degree earned: (Fill in one circle)

<input type="radio"/> High School	<input type="radio"/> Master's degree
<input type="radio"/> Some College	<input type="radio"/> Ph.D.
<input type="radio"/> 2-yr degree	<input type="radio"/> Other
<input type="radio"/> 4-yr degree	

18. Your marital status: (Fill in one circle)

- Married
- Divorced
- Single
- Widow/Widower

19. Your highest level of professional military education completed: (Fill in one circle)

- SOS
- ISS
- SSS
- None

**20. Please indicate the characteristics that you and your subordinate have in common.
(Fill in all circles that apply).**

<input type="radio"/> Career Field	<input type="radio"/> Source of Commission
<input type="radio"/> Gender	<input type="radio"/> Anticipate having Similar Career Path
<input type="radio"/> Age	<input type="radio"/> Previous Career-related Experience
<input type="radio"/> Marital Status	<input type="radio"/> Friendship
<input type="radio"/> Religion	<input type="radio"/> Similar Off-duty Interests
<input type="radio"/> Ethnic Background	<input type="radio"/> Association with Other Members of Subordinate's Family
<input type="radio"/> Education Level	<input type="radio"/> Other (please specify): _____

21. Number of personnel you supervise: (Fill in the blank)

Number: _____

**22. The rank (if military) or civilian equivalent (WG, GS, SES, etc.) of your supervisor:
(Fill in the blank)**

Rank/Equivalent: _____

Questions in this section refer to the officer whose name appears on the front of this survey.

Estimate the amount of time you are in contact with your subordinate in an *average week*. If you do not have contact every week, then divide the amount of time spent over a longer period by the number of weeks.

In an average week, how much time do you spend...

23. Coming in contact with this subordinate at work?	Hours per Week: _____
24. Discussing job-related problems with this subordinate?	Hours per Week: _____
25. Observing this subordinate performing his/her daily tasks?	Hours per Week: _____
26. Working with this subordinate to complete a task?	Hours per Week: _____
27. Seeing the results of this subordinate's work?	Hours per Week: _____
28. Monitoring this subordinate's progress?	Hours per Week: _____
29. Coming in contact with this subordinate outside of work?	Hours per Week: _____
30. Observing this subordinate performing a briefing for superiors, subordinates, or peers?	Hours per Week: _____
31. Reading material this subordinate has written?	Hours per Week: _____

Estimate the number of contacts you have with your subordinate during an *average week*. If you do not have contact every week, then divide the amount of time spent over a longer period by the number of weeks.

When communicating with your subordinate in an average week, how many times is the contact via:

32. Telephone?	Number of Contacts: _____
33. EMAIL?	Number of Contacts: _____
34. Facsimile?	Number of Contacts: _____
35. Face-to-Face?	Number of Contacts: _____

Using the following scale, fill in the circle that indicates the extent to which you believe each question is true.

Regarding your subordinate, to what extent have you.....		^① Not at All	^② To a Slight Extent	^③ To Some Extent	^④ To a Large Extent	^⑤ To a Very Large Extent
36.	Encouraged him/her to try new ways of behaving on the job?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
37.	Discussed his/her questions or concerns regarding feelings of competence, commitment to advancement, relationships with peers and supervisors or work/family conflicts?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
38.	Served as a role model?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
39.	Demonstrated good listening skills in your conversations?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
40.	Conveyed feelings of respect for him/her as an individual?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
41.	Encouraged him/her to talk openly about anxieties and fears that detract from his/her work?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
42.	Shared personal experiences as an alternative perspective to his/her problem?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
43.	Displayed attitudes and values similar to his/her own?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
43.	Assigned responsibilities to him/her that have increased his/her contact with people who will judge his/her potential for future advancement?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
44.	Reduced unnecessary risks that could have threatened his/her opportunities for promotion?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
46.	Helped him/her meet new colleagues?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
47.	Given him/her projects or tasks that have prepared him/her for higher positions?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
48.	Helped him/her finish projects or tasks to meet deadlines that otherwise would have been difficult to complete?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
49.	Encouraged him/her to prepare for advancement?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
49.	Given him/her projects that present opportunities to learn new skills?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
50.	Given projects that have increased his/her contact with higher level managers?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
51.	Protected him/her from working with other managers or work units before he/she knew about their likes/dislikes, opinions on controversial topics, and the nature of the political environment?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
52.	Kept him/her informed about what is going on at higher levels in the organization or how external conditions are influencing the organization?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
53.	Provided support and feedback regarding his/her performance as an officer?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
54.	Given him/her projects that increased written and personal contact with senior officers?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤
56.	Interacted with him/her socially outside of work?	<input type="radio"/> ①	<input type="radio"/> ②	<input type="radio"/> ③	<input type="radio"/> ④	<input type="radio"/> ⑤

Using the following scale, fill in the circle that indicates the extent to which you agree with each question.

***Compared with other Company Grade Officers,
how effective is this officer in ...***

	^① Much Below Average	^② Below Average	^③ Slightly Below Average	^④ Average	^⑤ Slightly Above Average	^⑥ Above Average	^⑦ Much Above Average
57. Helping others who need it?	①	②	③	④	⑤	⑥	⑦
58. Supporting a co-worker with a problem?	①	②	③	④	⑤	⑥	⑦
59. Cooperating with other company grade officers?	①	②	③	④	⑤	⑥	⑦
60. Maintaining good working relationships?	①	②	③	④	⑤	⑥	⑦

Using the following scale, fill in the circle that indicates the extent to which you agree with each question.

***Compared with other Company Grade Officers,
how likely is it that this officer would...***

	^① Not at All Likely	^② Slightly Likely	^③ Moderately Likely	^④ Very Likely	^⑤ Exceptionally Likely
61. Persist to overcome obstacles to complete a task?	①	②	③	④	⑤
62. Use self-discipline?	①	②	③	④	⑤
63. Take the initiative to solve a problem?	①	②	③	④	⑤
64. Perform consistently and reliably?	①	②	③	④	⑤

65. Circle the number that best represents the overall job performance of your subordinate.

7
6

 HIGH

Contributes more to unit effectiveness than most members of the work unit.

5
4
3

 MODERATE

Makes an average contribution to unit effectiveness.

2
1

 LOW

Contributes less to unit effectiveness than most other members of the work unit.

66. Circle the number that best represents the overall job performance of your subordinate.

7
6

HIGH

Performs at a high level compared with others of the same rank.

5
4
3

MODERATE

Performs at an average level compared with others of the same rank.

2
1

LOW

Performs at a low level compared with others of the same rank.

67. Circle the number that best represents the overall job performance of your subordinate.

7
6

HIGH

Exceeds standards for job performance.

5
4
3

MODERATE

Meets standards for job performance.

2
1

LOW

Does not meet standards for job performance.

Answer questions based on your experiences regarding mentoring. If additional space is necessary for your answers, please use a separate sheet of paper.

68. Are you aware of the Air Force Mentoring Program (AFPD 36-34)? (Fill in one circle)

- Yes
- No

69. Have you read publications about mentoring? (Fill in one circle)

- Yes
- No

70. Have you had any training in mentoring? (Fill in one circle)

- Yes
- No

71. Do you know of any groups or organizations that foster or encourage mentoring? (Fill in one circle)

- Yes
- No

72. If you answered YES to the previous question, please name groups that are most helpful to you.

(Fill in the blanks)

Name of Group: _____

Name of Group: _____

Name of Group: _____

Number of Meetings Attended: _____

Number of Meetings Attended: _____

Number of Meetings Attended: _____

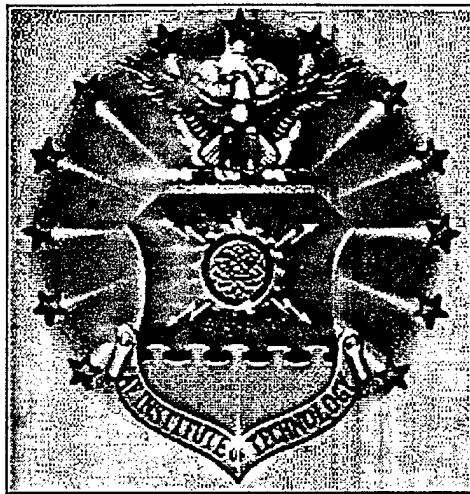
73. Finally, please provide any additional comments you may have regarding mentoring, your mentoring relationship, or suggestions to improve this survey.

Thank you for taking the time to complete this questionnaire. Please use the enclosed envelope to send the survey to AFIT/LAA. Please contact me or my thesis advisor at the following address if you have questions:

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Appendix C: The Company Grade Officer Survey



**A SURVEY TO ASSESS EFFECTIVE MENTORING
CHARACTERISTICS**

SURVEY TO BE COMPLETED BY:

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY (AETC)
AIR FORCE INSTITUTE OF TECHNOLOGY**

INFORMATION ABOUT THIS RESEARCH STUDY

Thank you for agreeing to participate in this research study. Your experiences will make an important contribution.

Description of the study: The purpose of this study is to assess the impact of career-related mentoring. Survey will be administered to company grade officers and a similar survey will be administered to the supervisors and/or mentors of these officers.

Confidentiality of your responses: This information is being collected for research purposes only. No one in your unit, base, or MAJCOM will ever see your individual responses. No statistics on units below the level of Aeronautical System Center will be revealed.

PRIVACY ACT STATEMENT

In accordance with AFI 37-132, paragraph 8, the following information is provided as required by the Privacy Act of 1974.

Authority: 10 U.S.C. 8013, Secretary of the Air Force; powers and duties; delegation by; implemented by AFI 36-2601, Air Force Personnel Survey Program.

Purpose: This survey is being conducted to collect demographic, affective, perceptual, and behavioral data regarding career-related mentoring relationships. This data will be analyzed to determine the effectiveness of career-related mentoring and potentially lead to improvements in mentoring practices.

Routine Use: Future programs designed to enhance mentoring training can draw upon techniques and effectiveness perceived to result from career-related mentoring of company grade officers. Individual responses will never be reported and ONLY members of the research team will be permitted to access the raw data. Reports summarizing mentoring effectiveness for the entire sample may be published. *No individual will be identified to anyone outside of the research team.*

Participation: Participation is voluntary. No adverse action will be taken against any member who does not participate in this survey or who does not complete any part of this survey.

CONTACT INFORMATION

If you have any questions, please feel free to contact me or my thesis advisor, Lt Col Van Scotter.

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INSTRUCTIONS

4. Please answer directly on the questionnaire.
5. Please use a "soft-lead" (No. 2) pencil and observe the following:
6. To ensure your privacy, please complete the questionnaire, seal it in the envelope which is provided, and return it through the base mail system to: AFIT/LAA Survey Collection Point, Wright-Patterson AFB, OH.

For the purposes of this survey, the terms "mentor", "mentoree", and "supervisor" are defined as follows:

Mentor: An individual with experience and knowledge who is committed to voluntarily providing support to and increasing the upward mobility of junior organization members.

Mentoree: A junior organizational member (officer) who receives guidance and support from a mentor.

Supervisor: An individual who oversees your daily work activities, assigns tasks, provides resources when appropriate, and provides performance feedback.

Questions in this section refer to your current supervisor and mentor.

1. Do you currently have a mentor? (Fill in one circle)

Yes
 No

2. Is your mentor assigned to the same work unit as you are? (Fill in one circle)

Yes
 No

3. Is your mentor also your supervisor? (Fill in one circle)

Yes
 No

4. What is the rank of your mentor? (Fill in the blank)

Rank: _____

5. How long have you known your mentor? (Fill in the blank)

Total Months: _____

6. How long have you been involved in this mentoring relationship? (Fill in the blank)

Total Months: _____

7. How long had you been assigned to your work unit before your current mentoring relationship began? (Fill in the blank)

Total Months: _____

8. Is your mentor: (Fill in one circle)

Male
 Female

9. Is your mentor: (Fill in one circle)

- American Indian or Alaskan Native
- Black, not of Hispanic Origin
- White, not of Hispanic Origin
- Asian American or Pacific Islander
- Hispanic
- Other (specify): _____

10. Your mentor's age: (Fill in the blank)

Years: _____

Questions in this section refer to you.

11. Are you: (Fill in one circle)

- Male
- Female

12. How long have you been assigned to your current work unit? (Fill in the blank)

Total Months: _____

13. Are you: (Fill in one circle)

- American Indian or Alaskan Native
- Black, not of Hispanic Origin
- White, not of Hispanic Origin
- Asian American or Pacific Islander
- Hispanic
- Other (specify): _____

14. Your age: (Fill in the blank)

Years: _____

15. Your rank: (Fill in the blank)

Rank: _____

16. Indicate your primary duty AFSC: (Fill in the blank)

AFSC: _____

17. Years in current AFSC: (Fill in the blank)

Years: _____

18. Your source of commission: (Fill in one circle)

- OTS
- ROTC
- USAFA
- Direct Commission
- N/A

19. Your highest academic degree earned: (Fill in one circle)

- 4-Yr degree
- Bachelor's +
- Master's degree
- Ph.D.
- Other

20. Your marital status: (Fill in one circle)

- Married
- Divorced
- Single
- Widow/Widower

21. Your highest level of professional military education completed: (Fill in one circle)

- SOS
- ISS
- SSS
- None

22. From the following choices, fill in the circles below to indicate the characteristics that you and your mentor have in common (Fill in all circles that apply).

<input type="radio"/> Career Field	<input type="radio"/> Source of Commission
<input type="radio"/> Gender	<input type="radio"/> Anticipate having Similar Career Path
<input type="radio"/> Age	<input type="radio"/> Previous Career-related Experience
<input type="radio"/> Marital Status	<input type="radio"/> Friendship
<input type="radio"/> Religion	<input type="radio"/> Similar Off-duty Interests
<input type="radio"/> Ethnic Background	<input type="radio"/> Association with Other Members of Mentor's Family
<input type="radio"/> Education Level	<input type="radio"/> Other (please specify): _____

23. What one characteristic do you believe is the most responsible for the development of this mentoring relationship (choice may be different than items listed in Question 22): (Fill in the blank)

Enter Characteristic: _____

Estimate the amount of time you have contact with your mentor during an *average week*. If you do not have contact every week, divide the amount of time spent over a longer period by the number of weeks.

In an average week, how much time does your mentor spend...

24. Coming in contact with you at work?	Hours per Week: _____
25. Discussing job-related problems with you?	Hours per Week: _____
26. Observing you performing daily tasks?	Hours per Week: _____
27. Working with you to complete a task?	Hours per Week: _____
28. Seeing the results of your work?	Hours per Week: _____
29. Monitoring your progress?	Hours per Week: _____
30. Coming in contact with you outside of work?	Hours per Week: _____
31. Observing you performing a briefing for superiors, subordinates, or peers?	Hours per Week: _____
32. Reading material you have written?	Hours per Week: _____

Estimate the number of contacts you have with your mentor during an *average week*. If you do not have contact every week, divide the amount of time spent over a longer period by the number of weeks.

When communicating with your mentor during an average week, how many times is the contact via:

33. Telephone?	Number of Contacts: _____
34. EMAIL?	Number of Contacts: _____
35. Facsimile?	Number of Contacts: _____
36. Face-to-Face?	Number of Contacts: _____

Using the following scale, fill in the circle that indicates the extent to which you believe each question is true.

To what extent has your mentor ...	① Not at All	② To a Slight Extent	③ To Some Extent	④ To a Large Extent	⑤ To a Very Large Extent
37. Encouraged you to try new ways of behaving on the job?	①	②	③	④	⑤
38. Discussed your questions or concerns regarding feelings of competence, commitment to advancement, relationships with peers And supervisors or work/family conflicts?	①	②	③	④	⑤
39. Served as a role model?	①	②	③	④	⑤
40. Demonstrated good listening skills in your conversations?	①	②	③	④	⑤
41. Conveyed feelings of respect for you as an individual?	①	②	③	④	⑤
42. Encouraged you to talk openly about anxieties and fears that detract from your work?	①	②	③	④	⑤
43. Shared personal experiences as an alternative perspective to your problem?	①	②	③	④	⑤
44. Displayed attitudes and values similar to your own?	①	②	③	④	⑤
44. Assigned responsibilities to you that have increased your contact with people who will judge your potential for future advancement?	①	②	③	④	⑤
45. Reduced unnecessary risks that could have threatened your opportunities for promotion?	①	②	③	④	⑤
47. Helped you meet new colleagues?	①	②	③	④	⑤
48. Given you projects or tasks that have prepared you for higher positions?	①	②	③	④	⑤
49. Helped you finish projects or tasks to meet deadlines that otherwise would have been difficult to complete?	①	②	③	④	⑤
50. Encouraged you to prepare for advancement?	①	②	③	④	⑤
51. Given you projects that present opportunities to learn new skills?	①	②	③	④	⑤
52. Given projects that have increased your contact with higher level managers?	①	②	③	④	⑤
53. Protected you from working with other managers or work units before you knew about their likes/dislikes, opinions on controversial topics, and the nature of the political environment?	①	②	③	④	⑤
54. Kept you informed about what is going on at higher levels in the organization or how external conditions are influencing the organization?	①	②	③	④	⑤
55. Provided support and feedback regarding your performance as an officer?	①	②	③	④	⑤
56. Given you projects that increased written and personal contact with senior officers?	①	②	③	④	⑤
57. Interacted with you socially outside of work?	①	②	③	④	⑤

Using the following scale, fill in the circle that indicates the extent to which you believe each statement is true.

<i>In the past, I have been prevented from OBTAINING a mentoring relationship because...</i>	① Strongly Disagree	② Disagree	③ Somewhat Disagree	④ Neither Disagree nor Agree	⑤ Somewhat Agree	⑥ Agree	⑦ Strongly Agree
58. Of a lack of opportunity to meet potential mentors.	①	②	③	④	⑤	⑥	⑦
59. Of the lack of opportunity to develop relationships with potential mentors.	①	②	③	④	⑤	⑥	⑦
60. Of a shortage of potential mentors.	①	②	③	④	⑤	⑥	⑦
61. Potential mentors are unwilling to develop a relationship with me.	①	②	③	④	⑤	⑥	⑦
62. Potential mentors are unwilling to develop a relationship with me because of <u>my</u> gender.	①	②	③	④	⑤	⑥	⑦
63. Potential mentors are unwilling to develop a relationship with me because of <u>their</u> gender.	①	②	③	④	⑤	⑥	⑦
64. Potential mentors are unwilling to develop a relationship with me because of <u>my</u> race.	①	②	③	④	⑤	⑥	⑦
65. Potential mentors are unwilling to develop a relationship with me because of <u>their</u> race.	①	②	③	④	⑤	⑥	⑦
66. Potential mentors lack the time to develop a mentoring relationship with me.	①	②	③	④	⑤	⑥	⑦
67. Potential mentors don't notice me.	①	②	③	④	⑤	⑥	⑦
68. Supervisors would disapprove if I entered a mentoring relationship.	①	②	③	④	⑤	⑥	⑦
68. Co-workers would disapprove if I entered a mentoring relationship.	①	②	③	④	⑤	⑥	⑦

Using the following scale, fill in the circle that indicates the extent to which you believe each statement is true.

***In the past, I have been prevented from
INITIATING a mentoring relationship because..***

70. There is a lack of access to potential mentors.	①	②	③	④	⑤	⑥	⑦
71. I am uncomfortable taking an assertive role in approaching a potential mentor.	①	②	③	④	⑤	⑥	⑦
72. I am afraid of being rejected by a potential mentor.	①	②	③	④	⑤	⑥	⑦
72. I am afraid that a potential mentor may be “put off” by such an advancement.	①	②	③	④	⑤	⑥	⑦
74. I believe that it is up to the mentor to make the first move.	①	②	③	④	⑤	⑥	⑦
75. My immediate supervisor may disapprove of me initiating a mentoring relationship.	①	②	③	④	⑤	⑥	⑦
76. My co-workers may disapprove of me initiating a mentoring relationship.	①	②	③	④	⑤	⑥	⑦
77. Such an approach may be misinterpreted as a sexual advance by a potential mentor.	①	②	③	④	⑤	⑥	⑦
78. Such an approach may be seen as a sexual advance by others in the organization.	①	②	③	④	⑤	⑥	⑦

Using the following scale, fill in the circle that indicates the extent to which you believe each statement is true.

	① Strongly Disagree	② Disagree	③ Somewhat Disagree	④ Neither Disagree nor Agree	⑤ Somewhat Agree	⑥ Agree	⑦ Strongly Agree
79. I have no need for a mentoring relationship.	①	②	③	④	⑤	⑥	⑦
80. I would like to be a mentor.	①	②	③	④	⑤	⑥	⑦
81. I intend to be a mentor.	①	②	③	④	⑤	⑥	⑦
82. I believe I have adequate experience and skills to be an effective mentor.	①	②	③	④	⑤	⑥	⑦
83. When I have a problem, I tackle it head on.	①	②	③	④	⑤	⑥	⑦
84. I can spot a good opportunity long before others can.	①	②	③	④	⑤	⑥	⑦
85. Nothing is more exciting than seeing my ideas turn into reality.	①	②	③	④	⑤	⑥	⑦
86. If I believe in an idea, no obstacle will prevent me from making it happen.	①	②	③	④	⑤	⑥	⑦
87. My role as an officer gives me a chance to test myself and my abilities.	①	②	③	④	⑤	⑥	⑦
88. If being an Air Force officer were more interesting, I would be motivated to perform better.	①	②	③	④	⑤	⑥	⑦
89. Mastering my skills as an officer means a lot to me.	①	②	③	④	⑤	⑥	⑦
90. My job is valuable to me for no other reason than I like to do it.	①	②	③	④	⑤	⑥	⑦
91. At times I get so involved in my job that I forget what time it is.	①	②	③	④	⑤	⑥	⑦
92. Even though my job could be rewarding, I am frustrated and find motivation continuing only because of my paycheck.	①	②	③	④	⑤	⑥	⑦
93. I would make a fine model for a new officer to follow in order to learn the skills he/she would need to succeed.	①	②	③	④	⑤	⑥	⑦
94. I do not know as much as others do about my job.	①	②	③	④	⑤	⑥	⑦
95. My job is a reward in itself.	①	②	③	④	⑤	⑥	⑦
96. No one around here knows how to get things done better than I do.	①	②	③	④	⑤	⑥	⑦
97. When it comes to my job, if anyone can find the answer, I am the one.	①	②	③	④	⑤	⑥	⑦
98. My talents, or where I can concentrate my attention best, are found in areas not related to the Air Force.	①	②	③	④	⑤	⑥	⑦
99. I honestly believe I have all the skills to perform well as an officer.	①	②	③	④	⑤	⑥	⑦
100. My working relationship with my supervisor is effective.	①	②	③	④	⑤	⑥	⑦
101. My supervisor seems to understand my problems and needs.	①	②	③	④	⑤	⑥	⑦
102. I can count on my supervisor to "bail me out", even at his/her own expense, when I really need it.	①	②	③	④	⑤	⑥	⑦
103. My supervisor has enough confidence in me that he/she would defend and justify my decisions if I were not present to do so.	①	②	③	④	⑤	⑥	⑦
104. Regardless of how much power my supervisor has built into his/her position, my supervisor would be personally inclined to use his/her power to help me solve problems in my work.	①	②	③	④	⑤	⑥	⑦
105. My supervisor recognizes my potential.	①	②	③	④	⑤	⑥	⑦

Answer questions based on your experiences regarding mentoring. If additional space is necessary for your answers, please write on the back of this page.

106. Are you aware of the Air Force Mentoring Program (AFPD 36-34)? (Fill in one circle)

- Yes
- No

107. Have you read publications about mentoring? (Fill in one circle)

- Yes
- No

108. Have you had any training in mentoring? (Fill in one circle)

- Yes
- No

**109. Do you know of any groups or organizations that foster or encourage mentoring?
(Fill in one circle)**

- Yes
- No

110. If you answered YES to the previous question, please name groups that are the most helpful to you. (Fill in the blanks)

Name of Group: _____

Number of Meetings Attended: _____

Name of Group: _____

Number of Meetings Attended: _____

Name of Group: _____

Number of Meetings Attended: _____

111. Finally, please provide any additional comments you may have regarding mentoring, your mentoring relationship, or suggestions to improve this survey.

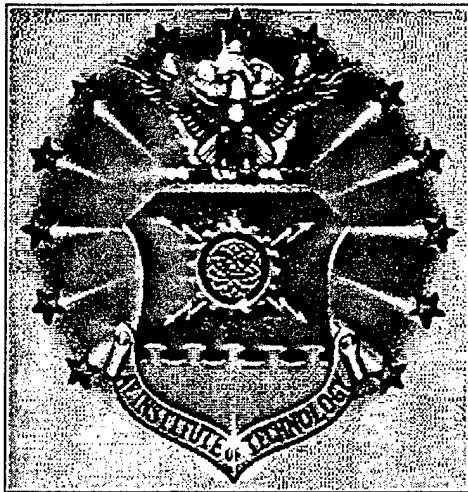
Thank you for taking the time to complete this questionnaire. Please use the enclosed envelope to send the survey to AFIT/LAA. Please contact me or my thesis advisor at the following address if you have questions:

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Appendix D: The Mentor Survey



**A SURVEY TO ASSESS EFFECTIVE MENTORING
CHARACTERISTICS AND PRACTICES**

FOR THE MENTOR OF:

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY (AETC)
AIR FORCE INSTITUTE OF TECHNOLOGY**

INFORMATION ABOUT THIS RESEARCH STUDY

Thank you for agreeing to participate in this research study. Your experiences will make an important contribution.

Description of the study: The purpose of this study is to assess the impact of career-related mentoring. Surveys will be administered to company grade officers, supervisors and/or mentors of these officers.

Confidentiality of your responses: This information is being collected for research purposes only. No one in your unit, base, or MAJCOM will ever see your individual responses. No statistics on units below the level of Aeronautical System Center will be revealed.

PRIVACY ACT STATEMENT

In accordance with AFI 37-132 paragraph 8, the following information is provided as required by the Privacy Act of 1974.

Authority: 10 U.S.C. 8013, Secretary of the Air Force; powers and duties; delegation by; implemented by AFI 36-2601, Air Force Personnel Survey Program.

Purpose: This survey is being conducted to collect demographic, affective, perceptual, and behavioral data regarding career-related mentoring relationships. This data will be analyzed to determine the effectiveness of career-related mentoring and potentially lead to improvements in mentoring practices.

Routine Use: Future programs designed to enhance mentoring training can draw upon techniques and effectiveness perceived to result from career-related mentoring of company grade officers. Individual responses will never be reported and ONLY members of the research team will be permitted to access the raw data. Reports summarizing mentoring effectiveness for the entire sample may be published. *No individual will be identified to anyone outside of the research team.*

Participation: Participation is voluntary. No adverse action will be taken against any member who does not participate in this survey or who does not complete any part of this survey.

CONTACT INFORMATION

If you have any questions, please feel free to contact me or my thesis advisor, Lt Col Van Scotter.

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INSTRUCTIONS

7. Please answer directly on the questionnaire.
8. Please use a "soft-lead" (No. 2) pencil and observe the following:
 3. To ensure your privacy, please complete the questionnaire, seal it in the envelope which is provided, and
return it through the base mail system to: AFIT/LAA Survey Collection Point, Wright-Patterson AFB, OH.

For the purposes of this survey, the terms "mentor" and "mentoree" are defined as follows:

Mentor: An individual with experience and knowledge who is committed to voluntarily providing support to and increasing the upward mobility of junior organization members.

Mentoree: A junior organizational member (officer) who receives guidance and support from a mentor.

The questions below refer to the officer whose name appears on the front of this survey. By giving you this survey, he/she is indicating that you have provided at least some career-related advice or help, or acted as his/her mentor.

1. Is this person assigned to the same work unit as you are? (Fill in one circle)
 Yes
 No
2. Are you the official rater of this person (i.e., Do you write his or her OPR)? (Fill in one circle)
 Yes
 No
3. What is this person's rank? (Fill in the blank)
Enter Rank: _____
4. How long have you known this person? (Fill in the blank)
Total Months: _____
5. How long have you mentored this person? (Fill in the blank)
Total Months: _____
6. How long had you been assigned to your work unit before you began mentoring this person? (Fill in the blank)
Total Months: _____
7. Is this person: (Fill in one circle)
 Male
 Female

8. Is this person: (Fill in one circle)

- American Indian or Alaskan Native
- Black, not of Hispanic Origin
- White, not of Hispanic Origin
- Asian American or Pacific Islander
- Hispanic
- Other (specify): _____

9. This person's age: (Fill in the blank)

Years: _____

Questions in this section refer to you.

10. Are you: (Fill in one circle)

- Male
- Female

11. How long have you been assigned to your current work unit? (Fill in the blank)

Total Months: _____

12. Are you: (Fill in one circle)

<input type="radio"/> American Indian or Alaskan Native	<input type="radio"/> Asian American or Pacific Islander
<input type="radio"/> Black, not of Hispanic Origin	<input type="radio"/> Hispanic
<input type="radio"/> White, not of Hispanic Origin	<input type="radio"/> Other (specify): _____

13. Your age: (Fill in the blank)

Years: _____

14. Your rank (if military) or civilian equivalent (WG, GS, SES, etc.): (Fill in the blank)

Rank/Equivalent: _____

15. Indicate your primary duty AFSC or Position Title: (Fill in the blank)

AFSC/Position: _____

16. Years in current AFSC or Position: (Fill in the blank)

Years: _____

17. Your source of commission: (Fill in one circle)

- OTS
- ROTC
- USAFA
- Direct Commission
- N/A

18. Your highest academic degree earned: (Fill in one circle)

- High School
- Some College
- 2-yr degree
- 4-yr degree
- Master's degree
- Ph.D.

19. Your marital status: (Fill in one circle)

- Married
- Divorced
- Single
- Widow/Widower

20. Your highest level of professional military education completed: (Fill in one circle)

- SOS
- ISS
- SSS
- None

21. From the following choices, please indicate the characteristics that you and your mentoree have in common. (Fill in all circles that apply)

<input type="radio"/> Career Field	<input type="radio"/> Source of Commission
<input type="radio"/> Gender	<input type="radio"/> Anticipate having Similar Career Path
<input type="radio"/> Age	<input type="radio"/> Previous Career-related Experience
<input type="radio"/> Marital Status	<input type="radio"/> Friendship
<input type="radio"/> Religion	<input type="radio"/> Similar Off-duty Interests
<input type="radio"/> Ethnic Background	<input type="radio"/> Association with Other Members of Mentoree's Family
<input type="radio"/> Education Level	<input type="radio"/> Other (please specify): _____

22. What one characteristic do you believe is the most responsible for the development of this mentoring relationship (choice may be different than items listed in Question 21): (Fill in the blank)

Characteristic: _____

23. Number of personnel you supervise: (Fill in the blank)

Number: _____

24. The rank (if military) or civilian equivalent (WG, GS, SES, etc.) of your supervisor: (Fill in the blank)

Rank/Equivalent: _____

Questions in this section refer to the officer whose name appears on the front of this survey.

Estimate the amount of time you are in contact with your mentoree during an *average week*. If you do not have contact every week, then divide the amount of time spent over a longer period by the number of weeks.

In an average week, how much time do you spend...

25. Coming in contact with your mentoree at work?	Hours per Week: _____
26. Discussing job-related problems with your mentoree?	Hours per Week: _____
27. Observing your mentoree performing his/her daily tasks?	Hours per Week: _____
28. Working with your mentoree to complete a task?	Hours per Week: _____
29. Seeing the results of your mentoree's work?	Hours per Week: _____
30. Monitoring your mentoree's progress?	Hours per Week: _____
31. Coming in contact with your mentoree outside of work?	Hours per Week: _____
32. Observing your mentoree performing a briefing for superiors, subordinates, or peers?	Hours per Week: _____
33. Reading material your mentoree has written?	Hours per Week: _____

Estimate the number of contacts you have with your mentoree during an *average week*. If you do not have contact every week, divide the amount of time spent over a longer period by the number of weeks.

When communicating with your mentoree during an average week, how many times is the contact via:

34. Telephone?	Number of Contacts: _____
35. EMAIL?	Number of Contacts: _____
36. Facsimile?	Number of Contacts: _____
37. Face-to-Face?	Number of Contacts: _____

Using the following scale, fill in the circle that indicates the extent to which you believe each question is true.

<i>Regarding your mentoree, to what extent have you....</i>	① Not at All	② To a Slight Extent	③ To Some Extent	④ To a Large Extent	⑤ To a Very Large Extent
38. Encouraged him/her to try new ways of behaving on the job?	①	②	③	④	⑤
39. Discussed his/her questions or concerns regarding feelings of competence, commitment to advancement, relationships with peers and supervisors or work/family conflicts?	①	②	③	④	⑤
40. Served as a role model?	①	②	③	④	⑤
41. Demonstrated good listening skills in your conversations?	①	②	③	④	⑤
42. Conveyed feelings of respect for him/her as an individual?	①	②	③	④	⑤
43. Encouraged him/her to talk openly about anxieties and fears that detract from his/her work?	①	②	③	④	⑤
44. Shared personal experiences as an alternative perspective to his/her problem?	①	②	③	④	⑤
45. Displayed attitudes and values similar to his/her own?	①	②	③	④	⑤
46. Assigned responsibilities to him/her that have increased his/her contact with people who will judge his/her potential for future advancement?	①	②	③	④	⑤
47. Reduced unnecessary risks that could have threatened his/her opportunities for promotion?	①	②	③	④	⑤
48. Helped him/her meet new colleagues?	①	②	③	④	⑤
49. Given him/her projects or tasks that have prepared him/her for higher positions?	①	②	③	④	⑤
50. Helped him/her finish projects or tasks to meet deadlines that otherwise would have been difficult to complete?	①	②	③	④	⑤
51. Encouraged him/her to prepare for advancement?	①	②	③	④	⑤
52. Given him/her projects that present opportunities to learn new skills?	①	②	③	④	⑤
53. Given projects that have increased his/her contact with higher level managers?	①	②	③	④	⑤
54. Protected him/her from working with other managers or work units before he/she knew about their likes/dislikes, opinions on controversial topics, and the nature of the political environment?	①	②	③	④	⑤
55. Kept him/her informed about what is going on at higher levels in the organization or how external conditions are influencing the organization?	①	②	③	④	⑤
56. Provided support and feedback regarding his/her performance as an officer?	①	②	③	④	⑤
57. Given him/her projects that increased written and personal contact with senior officers?	①	②	③	④	⑤
58. Interacted with him/her socially outside of work?	①	②	③	④	⑤

This section refers to experiences you may have had in the past. Using the following scale, fill in the circle that indicates the extent to which you agree with each statement.

<i>In the past, I have been prevented from OBTAINING a mentoring relationship because:</i>							
	^① Strongly Disagree	^② Disagree	^③ Somewhat Disagree	^④ Neither Disagree nor Agree	^⑤ Somewhat Agree	^⑥ Agree	^⑦ Strongly Agree
59. Of a lack of opportunity to meet potential mentorees.	①	②	③	④	⑤	⑥	⑦
60. Of the lack of opportunity to develop relationships with potential mentorees.	①	②	③	④	⑤	⑥	⑦
61. Of a shortage of potential mentorees.	①	②	③	④	⑤	⑥	⑦
62. Potential mentorees are unwilling to develop a relationship with me.	①	②	③	④	⑤	⑥	⑦
63. Potential mentorees are unwilling to develop a relationship with me because of <u>my</u> gender.	①	②	③	④	⑤	⑥	⑦
64. Potential mentorees are unwilling to develop a relationship with me because of <u>their</u> gender.	①	②	③	④	⑤	⑥	⑦
65. Potential mentorees are unwilling to develop a relationship with me because of <u>my</u> race.	①	②	③	④	⑤	⑥	⑦
66. Potential mentorees are unwilling to develop a relationship with me because of <u>their</u> race.	①	②	③	④	⑤	⑥	⑦
67. Potential mentorees lack the time to develop a mentoring relationship with me.	①	②	③	④	⑤	⑥	⑦
68. Potential mentorees don't notice me.	①	②	③	④	⑤	⑥	⑦
69. Supervisors would disapprove if I entered a mentoring relationship.	①	②	③	④	⑤	⑥	⑦
70. Co-workers would disapprove if I entered a mentoring relationship.	①	②	③	④	⑤	⑥	⑦

This section refers to experiences you may have had in the past. Using the following scale, fill in the circle that indicates the extent to which you agree with each statement.

In the past, I have been prevented from INITIATING a mentoring relationship because:

	^① Strongly Disagree	^② Disagree	^③ Somewhat Disagree	^④ Neither Disagree nor Agree	^⑤ Somewhat Agree	^⑥ Agree	^⑦ Strongly Agree
71. There is a lack of access to potential mentorees.	①	②	③	④	⑤	⑥	⑦
72. I am uncomfortable taking an assertive role in approaching a potential mentoree.	①	②	③	④	⑤	⑥	⑦
73. I am afraid of being rejected by a potential mentoree.	①	②	③	④	⑤	⑥	⑦
74. I am afraid that a potential mentoree may be “put off” by such an advancement.	①	②	③	④	⑤	⑥	⑦
75. I believe that it is up to the mentoree to make the first move.	①	②	③	④	⑤	⑥	⑦
76. My immediate supervisor may disapprove of me initiating a mentoring relationship.	①	②	③	④	⑤	⑥	⑦
77. My co-workers may disapprove of me initiating a mentoring relationship.	①	②	③	④	⑤	⑥	⑦
78. Such an approach may be misinterpreted as a sexual advance by a potential mentoree.	①	②	③	④	⑤	⑥	⑦
79. Such an approach may be seen as a sexual advance by others in the organization.	①	②	③	④	⑤	⑥	⑦

Using the following scale, fill in the circle that indicates the extent to which you agree with each statement.

	^① Strongly Disagree	^② Disagree	^③ Somewhat Disagree	^④ Neither Disagree nor Agree	^⑤ Somewhat Agree	^⑥ Agree	^⑦ Strongly Agree
80. I have no need for a mentoring relationship.	①	②	③	④	⑤	⑥	⑦
81. I would like to be a mentor.	①	②	③	④	⑤	⑥	⑦
82. I intend to be a mentor.	①	②	③	④	⑤	⑥	⑦
83. I believe I have adequate experience and skills to be an effective mentor.	①	②	③	④	⑤	⑥	⑦
84. I would be comfortable assuming a mentoring role.	①	②	③	④	⑤	⑥	⑦
85. I feel certain about how much authority I have.	①	②	③	④	⑤	⑥	⑦
86. Clear, planned goals and objectives exist for my job.	①	②	③	④	⑤	⑥	⑦
87. I know that I have divided my time properly in my job.	①	②	③	④	⑤	⑥	⑦
88. I know what my responsibilities are in my job.	①	②	③	④	⑤	⑥	⑦
89. I know exactly what is expected of me in my job.	①	②	③	④	⑤	⑥	⑦
90. Explanation is clear of what has to be done in my job.	①	②	③	④	⑤	⑥	⑦

This section refers to the way you feel about mentoring a junior officer now. Using the following scale, fill in the circle that indicates the extent to which you agree with each statement.

I decided to be a mentor because ...

	^① Strongly Disagree	^② Disagree	^③ Somewhat Disagree	^④ Neither Disagree nor Agree	^⑤ Somewhat Agree	^⑥ Agree	^⑦ Strongly Agree
91. I wanted to do it.	①	②	③	④	⑤	⑥	⑦
92. I thought I had to do it.	①	②	③	④	⑤	⑥	⑦
93. I was directed to do it.	①	②	③	④	⑤	⑥	⑦
94. Other (please specify)	①	②	③	④	⑤	⑥	⑦

This section refers to the way you feel about mentoring a junior officer now. Using the following scale, fill in the circle that indicates the extent to which you agree with each statement.

I picked this person to mentor because ...

	^① Strongly Disagree	^② Disagree	^③ Somewhat Disagree	^④ Neither Disagree nor Agree	^⑤ Somewhat Agree	^⑥ Agree	^⑦ Strongly Agree
95. I wanted to do it.	①	②	③	④	⑤	⑥	⑦
96. I thought I had to do it.	①	②	③	④	⑤	⑥	⑦
97. I was directed to do it.	①	②	③	④	⑤	⑥	⑦
98. Other (please specify).	①	②	③	④	⑤	⑥	⑦

This section refers to the way you feel about mentoring a junior officer now. Using the following scale, fill in the circle that indicates the extent to which you agree with each question.

Regarding your current mentoree...

	^① Strongly Disagree	^② Disagree	^③ Somewhat Disagree	^④ Neither Disagree nor Agree	^⑤ Somewhat Agree	^⑥ Agree	^⑦ Strongly Agree
99. I am sorry I mentored this person.	①	②	③	④	⑤	⑥	⑦
100. I am glad I mentored this person.	①	②	③	④	⑤	⑥	⑦

Using the following scale, fill in the circle that indicates the extent to which you agree with each question.

Has mentoring this person put you at risk because:

	^① Strongly Disagree	^② Disagree	^③ Somewhat Disagree	^④ Neither Disagree nor Agree	^⑤ Somewhat Agree	^⑥ Agree	^⑦ Strongly Agree
101. Your mentoree's poor performance may reflect on you?	①	②	③	④	⑤	⑥	⑦
102. Your mentoree takes time away from doing other things that would advance your career?	①	②	③	④	⑤	⑥	⑦
103. Of gossip in the workplace regarding potential favoritism toward mentoree?	①	②	③	④	⑤	⑥	⑦
104. Of possible perceptions of an unprofessional relationship?	①	②	③	④	⑤	⑥	⑦
104. Your mentoree's social behaviors (manners, dress, habits, etc.) may reflect on you?	①	②	③	④	⑤	⑥	⑦
106. Your mentoree might falsely report improper behavior?	①	②	③	④	⑤	⑥	⑦
107. Other (please specify)	①	②	③	④	⑤	⑥	⑦

Using the following scale, fill in the circle that indicates the extent to which you agree with each statement.

My Supervisor....

	^① Strongly Disagree	^② Disagree	^③ Somewhat Disagree	^④ Neither Disagree nor Agree	^⑤ Somewhat Agree	^⑥ Agree	^⑦ Strongly Agree
108. Knows of my mentoring work.	①	②	③	④	⑤	⑥	⑦
109. Is glad that I am an active mentor.	①	②	③	④	⑤	⑥	⑦
110. Has encouraged me to be a mentor.	①	②	③	④	⑤	⑥	⑦

Answer questions based on your experience regarding mentoring. If additional space is necessary for your answers, please write on the next page.

111. Are you aware of the Air Force Mentoring Program (AFPD 36-34)? (Fill in one circle)

- Yes
- No

112. Have you read any publications about mentoring? (Fill in one circle)

- Yes
- No

113. Have you had any training in mentoring? (Fill in one circle)

- Yes
- No

114. Do you know of any groups or organizations that foster or encourage mentoring? (Fill in one circle)

- Yes
- No

115. If you answered YES to the previous question, please name groups that are most helpful to you. (Fill in the blanks)

Name of Group: _____

Number of Meetings Attended: _____

Name of Group: _____

Number of Meetings Attended: _____

Name of Group: _____

Number of Meetings Attended: _____

116. Finally, please provide any additional comments you may have regarding mentoring, your mentoring relationship, or suggestions to improve this survey.

Thank you for taking the time to complete this questionnaire. Please use the enclosed envelope to send the survey to AFIT/LAA. Please contact me or my thesis advisor at the following address if you have questions:

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Vita

Captain Sharon Gibson hails from Edgerton OH, where she graduated from Edgerton High School and earned an academic scholarship to attend Eastern Michigan University. Upon graduation, she earned a Bachelor of Science Degree and was awarded a Teaching Associate Scholarship to attend Ohio University where she earned a Master of Arts Degree in Organizational Communication. After working in private industry for five years, she earned her commission through the Air Force's Officer Training School.

Both of her previous assignments have been within Air Mobility Command. Her first assignment was as a squadron adjutant in a KC-135 squadron at Robins AFB GA. From there, she became a deputy branch chief at Headquarters Twenty-First Air Force, McGuire AFB NJ. While at McGuire AFB, she transitioned from the Command and Control career field to the Logistics Plans career field.

She was selected to attend the Air Force Institute of Technology and will receive a Master of Science Degree in Logistics Management upon graduation. Following graduation, she will complete a remote assignment as a Logistics Plans Officer at Kunsan AB Korea with a follow-on assignment to Headquarters Air Mobility Command, Scott AFB IL.

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 074-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED	
	September 1998	Master's Thesis	
4. TITLE AND SUBTITLE			5. FUNDING NUMBERS
AN EVALUATION OF CHARACTERISTICS AND PRACTICES ASSOCIATED WITH EFFECTIVE MENTORING WITHIN THE UNITED STATES AIR FORCE			
6. AUTHOR(S)			
Sharon Gibson, Captain, USAF			
7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S)			8. PERFORMING ORGANIZATION REPORT NUMBER
Air Force Institute of Technology 2950 P Street WPAFB OH 45433-7765			AFIT/GLM/LAL/98S-5
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER
ASC/CC Brig Gen David A. Herrelko 1865 4 th Street, Room 208 WPAFB OH 45433-7126			
11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION / AVAILABILITY STATEMENT		12b. DISTRIBUTION CODE	
Approved for public release; distribution unlimited			
13. ABSTRACT (Maximum 200 Words)			
The US Air Force has recently implemented a policy of assigning supervisors as the mentors of company grade officers. This study investigated the differences in mentoring effectiveness and perceived barriers to mentoring reported by Air Force company grade officers (CGOs), their organizationally-assigned mentors (assigned), and CGO-selected mentors (voluntary). Results indicated that junior officers believed they had effective mentoring relationships from both assigned and voluntary mentors, but as officers progressed to the rank of captain, they were more likely to seek out mentors outside of their chains-of-command. Junior officers indicated work-related contact time spent on career-related mentoring primarily influenced their judgments of effective mentoring. Leader/Member Exchange, Sense of Competence, Proactive Personality, and Performance Ratings influenced perceptions of mentoring from the mentor perspective. More competent, informed CGOs were less likely to perceive barriers to gaining mentors and mentors were less likely to consider the mentoring relationship risky when the CGOs were more junior in rank (lieutenants). Exposure to mentoring-related information increased the effectiveness and decreased the perceptions of barriers for both protégés and mentors. Research conclusions suggest the Air Force Mentoring Program is effective for lieutenants, but the mandatory nature of the program may not maximize benefits for captains.			
14. Subject Terms			15. NUMBER OF PAGES
Mentoring, Effective Mentoring, Barriers to Mentoring, Voluntary Mentoring, Assigned Mentoring, Mentoring in the Military.			117
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18
298-102

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The purpose of this questionnaire is to determine the potential for current and future applications of AFIT thesis research. **Please return completed questionnaire to: AIR FORCE INSTITUTE OF TECHNOLOGY/LAC, 2950 P STREET, WRIGHT-PATTERSON AFB OH 45433-7765.** Your response is important. Thank you.

1. Did this research contribute to a current research project? a. Yes b. No

2. Do you believe this research topic is significant enough that it would have been researched (or contracted) by your organization or another agency if AFIT had not researched it? a. Yes b. No

3. Please estimate what this research would have cost in terms of manpower and dollars if it had been accomplished under contract or if it had been done in-house.

Man Years _____ \$

4. Whether or not you were able to establish an equivalent value for this research (in Question 3), what is your estimate of its significance?

- a. Highly Significant
- b. Significant
- c. Slightly Significant
- d. Of No Significance

5. Comments (Please feel free to use a separate sheet for more detailed answers and include it with this form):

Name and Grade

Organization

Position or Title

Address